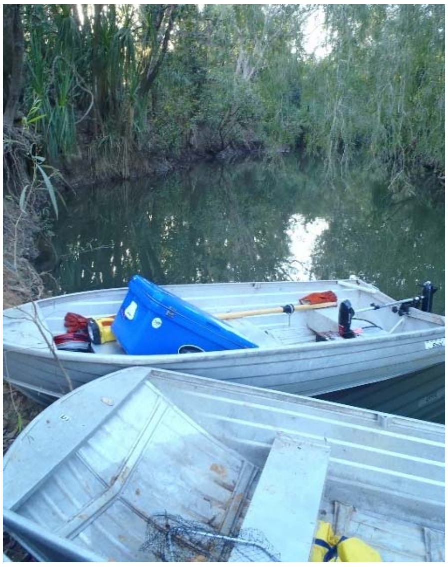
Appendix 5.

Hydrobiology (2016b) *Aquatic Ecosystem Survey, Early and Late Dry Season 2015.* Prepared for the Department of Mines and Energy, Northern Territory Government.

Department of **Primary Industry and Resources**




Rum Jungle Aquatic Ecosystem Survey

Early and Late Dry Season 2015

June 2016

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EXECUTIVE SUMMARY

Hydrobiology was commissioned by the Northern Territory Government (Department of Mines and Energy) to undertake an impact assessment and develop locally derived water quality guidelines for the former Rum Jungle mine site. This report covers an aquatic ecosystem surveys conducted in the early dry season (May-June) in 2014 and 2015, and late dry season (September) in 2015, which was undertaken to provide input data to be used in that assessment. It was the first such survey since the 1990s, when post remediation surveys were first conducted after the initial mine site rehabilitation in the mid-1980s (see Jeffree and Twining 2000, Jeffree *et al.* 2001).

Specifically, the objectives were to:

1. update the assessment of the status of the aquatic ecosystems downstream of the mine lease area since the surveys of the 1990s, with particular focus on where the patterns of aquatic ecosystem condition differed from those observed in the earlier assessments;
2. provide contemporary aquatic ecosystem condition assessment and species distribution patterns that, in combination with water and sediment quality monitoring data, could be used to develop revised water quality objectives based on ecosystem response to contaminant concentrations; and
3. investigate alternative sampling techniques that would potentially make future sampling more appropriate and/or cost effective

Fishes and macrocrustaceans, macroinvertebrates and benthic diatoms were sampled from up to 18 sites in the Finniss River upstream of Walker's Ford, including the East Branch to upstream of the Rum Jungle mine lease area, in May – June 2014 and May 2015. A further sampling round was conducted in September 2015, to characterise the aquatic community during the late dry season in the East Branch. However, due to 2015 having a particularly severe dry season, control sites upstream of the mine lease were dry, thus sampling was limited only to sites downstream of the mine area. Where possible and appropriate at each site, sampling methods were designed to be comparable with methods which had been used historically, but other methods were trialled according to the third objective.

Diatoms

Diatom assemblages that develop in a particular area depend on different environmental factors, including metal concentrations; therefore, the species that can be found in given water body will inform about localised environmental conditions. One species which is known to be a very reliable indicator of metal contamination by its presence is *Achnanthidium minutissimum*. This species showed a clear and obvious reduction in its abundance and its proportional contribution to communities further downstream of the mine (from May-June 2014/15 data). Furthermore, it was not present in samples from the East branch catchment upstream of the mine and largely absent from sites in zones 5 and 6 of the Finniss River. Other taxa, also noted as tolerant of high metal concentrations (e.g. *Nitzschia palea*) showed a

similar pattern. These results appear to be very consistent with those of a study by Ferris et al. (2002), wherein a gradient of improving diatom condition was observed through the East Branch downstream from the mine lease. In contrast to the community data, values of total abundance and species richness were not particularly useful in determining differences among and between zones. For the September sampling round, sampling was restricted only to sites within and downstream of the mine lease. Surprisingly, values of abundance and diversity were very similar to that of May-June sampling, and did not show a great deal of variation among sites; the only exception being EB@GS200 (zone 2) where species richness was noticeably reduced.

Macroinvertebrates

The 2015 assessment showed that sites within and immediately downstream of the mine (i.e. zones 2 and 3) had lower values of abundance and taxonomic diversity and PET taxa richness than control sites upstream of the mine (Zones 1 and 5). The community assemblage at sites in zone 2, and several sites in zone 3, were also shown to be statistically distinct, and were typified by high proportions of chironomids (midges). In contrast, sites upstream of the mine lease, and at control sites and sites further downstream (in zones 4, 6 and 7) were composed of a more even spread of taxa, and high proportions of Caenidae (mayflies). The one exception to the above was site FRusFC (Zone 6), which was shown to be distinct from all other sites. The overall patterns of abundance, richness and community composition were broadly similar across 2014/15 sampling rounds, given the natural variation due to the ephemeral nature of some components of the system. A similar pattern of relative abundance and richness was also observed across zones to that previously reported by Edwards (2002) (also in May/June). For the September 2015 sampling round, both abundances and richness appeared to show a gradient of lower values within and immediately downstream of the mine area but progressively higher towards zone 4, where values again decreased.

Historical comparisons of fish

A comparison of fish community composition, diversity and abundance at sites downstream of the mine on the Finniss River with unexposed sites prior to remediation and ~10 (1990s) and ~30 years post remediation (2010s) was undertaken. Overall it was found that fish communities from sites downstream of mine inputs prior to the 1980s remediation were significantly different from unexposed sites, being depleted in abundance and diversity. However, this was not the case for samples post remediation where there appeared to have been recovery of fish communities at the exposed sites in zone 6. There was clear evidence that downstream and upstream communities were more alike post remediation. Despite this observation, abundances at zone 6 were reduced in the most recent sampling rounds (2010s) relative to the 1990s. However, flow in this reach of the Finniss River is particularly variable and is likely to be a substantial confounding factor affecting abundances.

Fishes and macrocrustaceans

Contrasting patterns of total abundance and richness between Fyke nets and electrofishing methods were observed. The Fyke net data showed abundances to be generally higher in the East Branch relative to the Finniss River, and the upstream control site EB@LB contained significantly higher abundances than all other sites. However, this was not reflected in species richness, as values across sites were reasonably similar (and not significantly different). Electrofishing, however, revealed a highly contrasting dataset. Abundances were particularly low upstream of the East Branch (zone 1) and within the mine lease (zone2), with consistently higher values across all other zones; whereas richness values were more consistent across East Branch sites (~7), but generally lower than the Finniss River (~10). Analysis of the community composition identified a far greater similarity between datasets. Results from both methods revealed the East Branch and Finniss River to be composed of distinctively different communities; but neither resulted in a clear distinction between up and downstream sites within each branch (e.g. East Branch or Finniss River). For the September sampling round, abundances were much reduced relative to May- June sampling, but richness was more comparable. Both metrics recorded lower values at sites closest to the mine.

Tissue metals

For cobalt, lead, manganese, nickel and zinc there were differences through sites consistent with a source of increased bioavailability within the East Branch, but concentrations of cobalt, lead and manganese were often higher at sites some way downstream of the mine lease in the upper reaches of zone 3, close to where water discharges from Brown's Oxide mining operation (which is currently in care and maintenance). Compared to the 2014 dataset, concentrations in 2015 were generally lower. Contaminant processes are dominated by climatic regime and flow rates, whereby later rains and lower flow rates in 2015 relative to 2014, resulted in a lower level of contaminant transport to the East Branch, which appears to be what was observed.

This report provides a contemporary assessment of the status of the aquatic ecosystems downstream of the mine lease, the first of its kind since the surveys of the 1990s. Some interesting patterns emerged and are discussed in detail within. In short, little evidence of an impact from the mine on aquatic biota within the Finniss River (downstream of the East Branch) was detected, but strong evidence that the mine continues to impact the aquatic ecosystem within the East Branch itself was recorded. Therefore, this modern assessment of the East Branch should be used as the baseline from which to determine any improvements from remediation in the future.

Given that the biological status of the intermittent East Branch will be a function of both the contaminant loads from Rum Jungle as well as water flows, both factors need to be taken into account when developing a monitoring program with the validity to demonstrate ecological improvements that can be attributed to further mine site remediation.

The investigation of alternative fish sampling techniques, determined that the use of Fyke nets combined with electrofishing provides a simple affordable and comprehensive assessment of fish populations, and is therefore, highly recommended for future sampling rounds.

Rum Jungle Aquatic Ecosystem Survey

Early and Late Dry Season 2015

June 2016

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1 INTRODUCTION

1.1 Background

Hydrobiology was commissioned by the Northern Territory Government (Department of Mines and Energy) to undertake an impact assessment and develop locally derived water quality guidelines for the former Rum Jungle mine site. This report covers an aquatic ecosystem survey conducted in May-June 2014 which was undertaken to provide input data to be used in that assessment. It was the first such survey since the 1990s, when post remediation surveys were first conducted after the initial mine site rehabilitation in the mid-1980s (see Jeffree and Twining 2000, Jeffree *et al.* 2001).

As described in the study Terms of Reference (ToR), the former Rum Jungle Mine site was mined in the 1950s-1970s then rehabilitated during the 1980s. Monitoring of landform stability and water quality has continued since that time. A current collaborative Northern Territory and Commonwealth Governments project (under a Partnership Agreement) aims to provide a more permanent reduction in environmental impacts from the site due to acid and metalliferous drainage (AMD) by adopting leading practice rehabilitation methods. A Conceptual Rehabilitation Plan was completed in May 2013 as the final output of Stage 1.

Already completed are some of the studies to apply the ANZECC (2000) water quality guidelines for rehabilitation planning at the Rum Jungle Mine site. The aim of these studies is to provide:

- a clear definition of environmental values, or uses;
- a good understanding of links between human activity, including indigenous uses, and environmental quality;
- unambiguous management goals;
- appropriate water quality objectives, or targets; and
- an effective management framework, including cooperative and regulatory, feedback and auditing mechanisms.

Two reports which already been completed (Hydrobiology, 2013a and 2013b) have identified and defined the receiving environment including their relevant environmental values in accordance with ANZECC/ARMCANZ methodology including assessment of the aquatic ecosystems as well as fluvial sediments downstream of the mine site. Building on these previous two studies, the purpose of this project was to:

- undertake expanded environmental impact assessment monitoring to ensure a robust data set is compiled and interpreted (in parallel with ongoing monitoring by DME) and, based on this assessment, make recommendations in relation to any elevated levels of contaminants identified or measurable biological impairment; and
- develop locally derived water quality guidelines which can be applied to the process of developing detailed designs for rehabilitated landforms at Rum Jungle. These will be used as a basis for planning all existing and new data (gathered by DME and this project).

1.2 Objectives

Specifically for this survey, the objectives were to:

- update the assessment of the status of the aquatic ecosystems downstream of the mine lease area since the surveys of the 1990s, with particular focus on where the patterns of aquatic ecosystem condition differed from those observed in the earlier assessments; and
- Provide contemporary aquatic ecosystem condition assessment and species distribution patterns that, in combination with water and sediment quality monitoring data, could be used to develop revised water quality objectives based on ecosystem response to contemporaneous contaminant concentrations.

This report provides a description of the survey that was undertaken and reviews the aquatic ecosystem condition data in the light of those objectives.

2 METHODOLOGY

2.1 Survey Timing and Sampling Sites

The survey was conducted from the 17th of May to the 3rd of June and the 7th to the 14th of September, 2015. Sampling was conducted by Hydrobiology with field support from Ecoz Pty Ltd. Although inclusion of Traditional Owners in the sampling team was sought, via liaison between DME and the Northern Land Council, unfortunately no Traditional Owners were able to volunteer to participate at the time of the survey. Figure 1 displays the locations of sites on the Finniss River in relation to the Rum Jungle Mine (RJM). The 18 sites were distributed across seven zones that relate to distances downstream of or locations upstream of inputs of mine-derived contaminants and sources of dilution (see Hydrobiology 2013). Sampling sites on the EB cover four zones. These zones contained: (1) sites upstream of the RJM (control sites, zone1); sites in the immediate vicinity of the RJM (impacted sites, zone 2), and sites progressively further downstream (zones 3 and 4). Acid Mine Drainage (AMD) enters the intermittent East Branch (sites prefixed EB) within zone 2 and the upper limits of zone 3. Zones on the Finniss River are defined by the catchment upstream of the East branch, and reaches between major tributary junctions that incur some level of dilution and geochemical alteration of mine-derived water. The survey sites are listed in Table 2-1 and their locations are shown in Figure 2-1.

Table 2-1 Sampling sites used for the 2015 survey and corresponding historical site codes.

Site Code	Historic Code	Site Name	Easting	Northing	Zone
EB@LB		East Branch at Lease Boundary	131.02700	-12.98820	1
FC@LB		Fitch Creek at Lease Boundary	131.01600	-12.99887	1
EB@G_Dys		East Branch at Dyson's gauging station	131.01700	-12.98780	2
EB@GS200		East Branch at gauging station GS8150200	131.00059	-12.98996	2
TC@LB		Tailings Creek at Lease Boundary	131.99840	-12.98010	2
EB@GS327		East Branch at gauging station GS8150327	130.99100	-12.97660	3
EBdsRB	EB5	East Branch downstream of Railway Bridge	130.98417	-12.98019	3
EB@GS097		East Branch at gauging station GS8150097	130.96800	-12.96410	3
EBusHS	EB3	East Branch upstream of Hannah's Spring	130.96402	-12.96414	3
EBdsHS	EB2	East Branch downstream of Hannah's Spring	130.96090	-12.96346	4
EBusFR	EB1	East Branch upstream of the Finniss River Confluence	130.95100	-12.95950	4
FRUSMB	~ FR6	Finniss River Upstream Mount Burton mine	130.96300	-12.98240	5
FRDSMB	FR5	Finniss River Downstream Mount Burton mine	130.96039	-12.97912	5
FR@GS204	FR4	Finniss River at gauging station GS8150204	130.94200	-12.94780	6
FR3	FR3	Finniss River 1.1km downstream of GS8150204	130.93085	-12.94718	6
FRusFC	FR2	Finniss River upstream of Florence Creek	130.78637	-12.97783	6
FRdsFC	FR1	Finniss River downstream Florence Creek	130.76000	-12.96740	7
FR0	FR0	Finniss River at Walker's Ford	130.71533	-12.91317	7

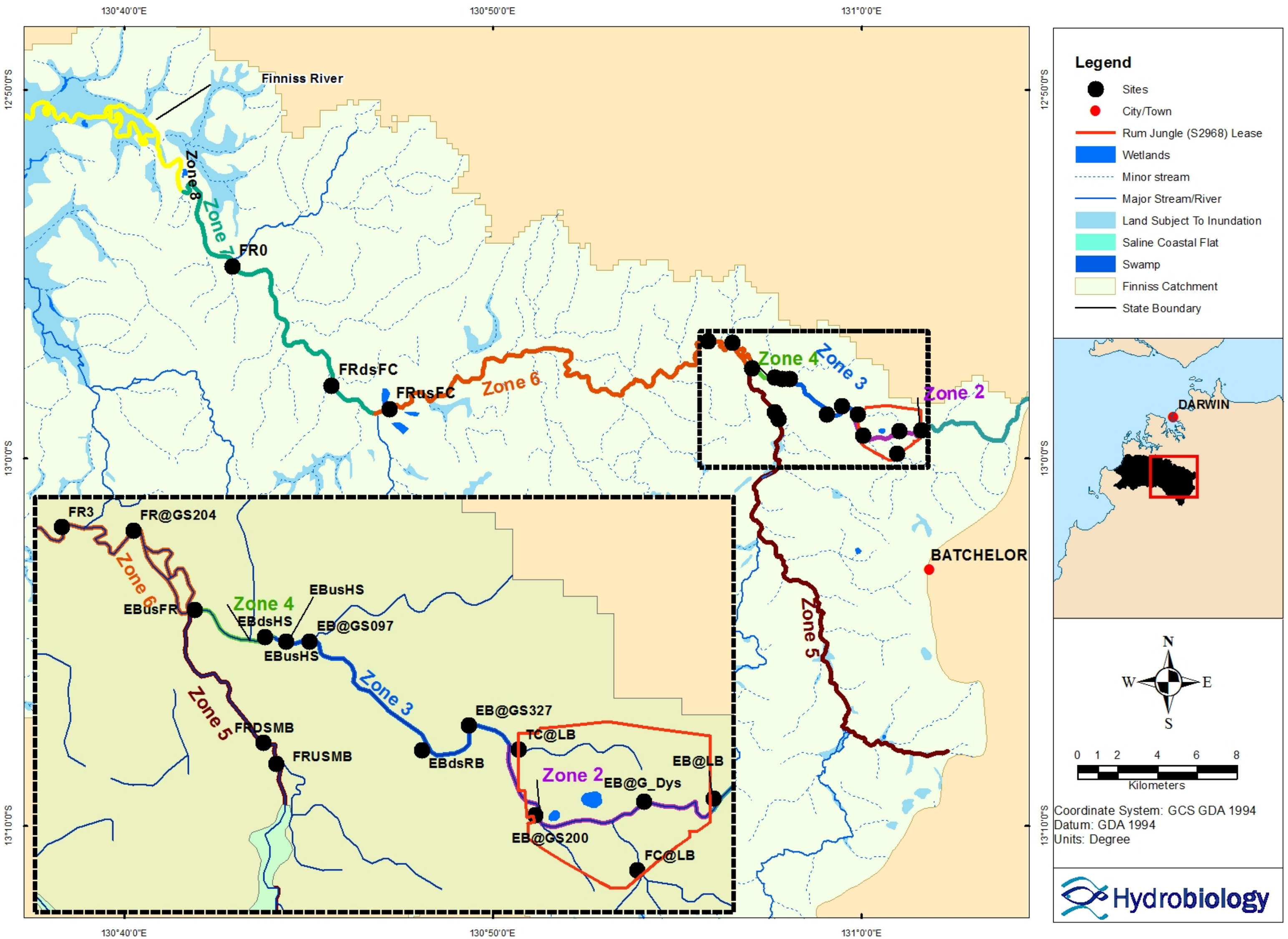

Figure 2-1 Sampling site locations

2.2 Field procedure

2.2.1 Gill netting

Gill nets were set out at from 16:30 to midnight and were checked at 20:30. Samples from individual gill nets were scaled to the net dimensions of the historical dataset for abundance measurements, but not for species richness (see 2.3). For a detailed description of the gill netting procedure please refer to Hydrobiology (2014) and the results section below.

2.2.2 Electrofishing

Electrofishing was conducted using a Smith Root model LR20B backpack electro fisher. At most sites where it was used, rainbowfishes were readily evident in the sampling area, and so the instrument settings were adjusted according to the electrical conductivity of the water and the responses of the rainbowfishes. If larger specimens and particularly gudgeons were present, the output settings were adjusted according to the responses of those species when encountered. In particular, care was taken to avoid causing cervical muscle spasms in gudgeons and gobies, which can result in debilitating injuries, as these groups are more prone to this impact than other fishes. Generally, the instrument was initially set at 150 V, with a pulse frequency of 70 Hz and a duty cycle of 40%, and adjusted according to fish responses.

At each site a visual assessment was made of areas that could be safely waded. The electro fisher operator and assistant then waded upstream through the selected area, with one or more crocodile spotters on the stream high bank where judged appropriate, sampling in all available habitats within the safe sampling area or when more than 10 mins had transpired from the last new species collected, whichever occurred first. Electrofishing samples were standardised by scaling to 400 s of instrument on-time for abundance data, but not for species richness. All captured specimens were kept alive in a sampling bucket, and identified to species and counted before return to the sampling site. Only one sample was taken per site using this device.

2.2.3 Fyke nets

Fyke nets of two sizes were used, depending on the availability of suitable setting locations and the water depth at those locations. The nets were:

- large Fyke – 1 m diameter with wings 5 m long by 1 m deep with 4 mm woven mesh; and
- small Fyke – 0.5 m diameter with wings 5 m long by 1 m deep with 4 mm woven mesh.

Fyke nets were set overnight (dusk to dawn) at the time of setting the gill nets at each site (if set), after visual selection of suitable sites that were safe to wade, and were of suitable depth for each size net. Only two nets were set at each site, with the combination of sizes used dependent on the water depth at each site, with a preference toward using the 1 m diameter nets where possible. At EB@GS097 two large and two small nets were also set to provide some basis for comparison between net sizes at a site.

The nets were set in a manner to ensure at least part of the final cod end was above water so that any air breathing species collected would not drown overnight. In the morning, the nets were retrieved and the catch was emptied into a bucket of water where the specimens were kept alive until identified to species and counted and then returned alive to the sampling site. Any trapped reptiles (turtles and crocodiles were captured during the survey) were removed from the net immediately on retrieval of the net, identified and counted before release at the site of capture. Turtles were measured for carapace length and photographed prior to release.

2.2.4 Bait traps

Standard recreational bait traps 43 cm × 25 cm × 25 cm, with 2 mm mesh and funnels on each end were baited with cat biscuits and set in backwaters, snags and bank overhangs from dawn to dusk. A total of five traps was set at each site where they were employed. After the traps were retrieved, captured specimens were identified to species, counted and returned to the water.

2.2.5 Macroinvertebrate sampling

Macroinvertebrate sampling used a reconstruction of the submersible pumped water sampler used by Edwards (2002). The sampler consists of a 250 mm internal diameter cylindrical sampling head unit that is connected by a sampling hose and a return water hose to a second unit that encloses the sample collection mesh and a pump unit. The pump is used to circulate water from the head unit through the collection mesh and back to the head unit, trapping entrained macroinvertebrates. Samples were collected only from river bed sands that could be safely accessed by wading. Agitation of the sands enclosed by the head unit to a depth of 100 mm by use of mild steel probe allowed collection of macroinvertebrates on the sand surface and to a depth of 100 mm within the sand. Three replicate samples were collected at each site, with each replicate selected randomly from the selected sampling area.

The mesh size used was 500 μm, on the recommendation of C. Edwards (DME) based on knowledge of the macroinvertebrate assemblages from previous sampling campaigns in the 1990s. The collected specimens and associated debris retained by the collection mesh were preserved in 70% ethanol in plastic jars and labelled. The preserved samples were sent to Alistair Cameron Consulting for sample sorting and specimen identification, generally to the Family level of identification used by Edwards (2002), and enumeration.

2.2.6 Diatom sampling

Diatom samples were collected with the use of a small plastic spatula to collect sediment surface film from backwater/depositional areas that were safely accessible at each site. Each sample consisted of sediment surface scrapes from at least three areas, with two replicates at each site. The samples were placed into plastic vials, and preserved with Lugol's solution. The preserved samples were sent to the Geography, Environment and Population Department at Adelaide University for identification and enumeration (based on standard microscope fields of view).

2.2.7 Tissue metal concentration samples

Samples of the following tissue types and species were collected at each site, depending on their availability from the sampling regime at each site:

- Bony bream *Nematalosa erebi* flesh (dorsal muscle) samples;
- Hyrtl's tandan *Neosilurus hyrtlii* flesh samples;
- Northern trout gudgeon *Mogurnda mogurnda* hind body samples;
- Black-banded rainbowfish *Melanotaenia nigrans* whole body samples; and
- *Macrobrachium bullatum* purged (in site water for at least 48 h until faecal pellets were no longer visible in the gut) cephalothorax samples.

Specimens for tissue metal concentration analysis were then frozen until they could be dissected upon return to the EMU laboratories in Darwin. Dissections were performed on fresh polyethylene sheets using instruments that had been washed in a solution of 10% analytical grade nitric acid in demineralised water. Precautions were taken during dissection to prevent contamination of tissues by i) changing scalpel blades between fish batches from each site and species, ii) having the dissector and assistants wear vinyl surgical gloves, and iii) washing all tissues and dissecting equipment with distilled/deionised water before and after each dissection. After dissection each tissue sample was thoroughly rinsed with deionised water and placed in a separate sample bag and labelled. This bag was then placed in a second bag, which was also labelled. Samples were then frozen prior to shipping.

The frozen samples were then transported back to Brisbane on ice where they were on-forwarded to Advanced Analytical Australia in Brisbane for tissue metal concentration analysis by ICP-MS.

Samples of fish flesh for radionuclide activity analysis were also dissected on fresh polyethylene sheets using instruments that had been washed in a solution of 10% analytical grade nitric acid in demineralised water. At least 250 g of flesh tissue was taken per sample. After dissection each tissue sample was thoroughly washed with deionised water and placed in a separate sample bag and labelled. This bag was then placed in a second bag, which was also labelled. Samples were then frozen in readiness for shipping.

The frozen samples were then transported back to Brisbane on ice were they were on-forwarded to The National Centre for Radiation Science of ESR (Institute of Environmental Science and Research Ltd) in Christchurch, New Zealand, for analysis for ^{210}Pb, ^{210}Po, ^{226}Ra and ^{228}Ra.

Mussel (*Velesunia angasi)* samples were collected by hand at each selected site where they occurred. Up to 50 specimens were collected at each site, and kept alive in site water until they could be delivered to the Environmental Research Institute of the Supervising Scientist (ERISS) for analysis for ^{210}Pb, ^{210}Po, ^{226}Ra and ^{228}Ra.

2.3 Data Analysis

Data sets for diatoms, benthic macroinvertebrates and fish were each analysed separately, but using similar statistical approaches and methods. Total abundances and taxonomic richness were tested for significant differences between sites, zones and years, using either parametric analysis of variance (ANOVA) or the non-parametric equivalent, Krustal-Wallace (K-W). Pairwise comparisons were conducted using either the Tukey test (ANOVA) or Mann-Whitney U test (K-W), using the Bonferroni adjustment. For benthic macroinvertebrates only, analysis of Signal 2 Scores was conducted; whereby, samples were separated into 1 of 4 quadrants, which infer information about the likely conditions of those sites in relative space (see Chessman 2003).

Multivariate analyses: Patterns in community structure were investigated using the PRIMER (V.6) software package. Each dataset was fourth root transformed to reduce the weighting of dominant taxa. Bray-Curtis similarities were calculated to produce similarity matrices, which were classified by Nonmetric Multi-Dimensional Scaling (MDS) and cluster analysis. Cluster analyses were tested using the SIMPROF routine. The SIMPER procedure was applied to identify key taxa in discriminating between samples. Analysis of Similarity (ANOSIM) was applied to identify if significant differences existed among and between the predefined Zones (1-7).

Historical comparisons: For benthic macroinvertebrates and fish, pre-existing data was available for comparisons with the current dataset. For macroinvertebrates, this was limited simply to total abundance and taxonomic diversity. For fish, the data were far more detailed, and represented previously published work (Jeffree & Williams 1975, Jeffree et al. 2001). A comparison of fish community composition, abundance and diversity at impacted sites on the Finniss River with sites unexposed to mine contaminants, prior to remediation and at ~10 (1990s) and ~30 years post remediation (2010s) was undertaken. Data on the abundances of the seven most commonly occurring taxa caught were reported previously (Jeffree & Williams 1975, Jeffree et al. 2001). The data from these studies were confined to six sites, which corresponded to FRusFC, FR3 and FR@GS204 (designated as impacted) and FRdsFC, FRdsMB and FRusMB (designated as unimpacted). Our analysis was therefore limited to these sites and taxa. the same standardisation procedure as detailed in Hydrobiology (2014) was used, but with the following addition. In 2014 gill nets were set out at from 16:30 to midnight and were checked at 20:30. In 2015 nets were only set from 16:30 and removed at 20:30. In order to correct for this, the proportion of individuals and species that were caught between 20:30 and midnight from the 2014 sampling (Hydrobiology 2014) was determined, and adjusted the data accordingly.

Three sampling rounds were conducted in the 1970s (May/June, Aug/Sep and Nov 1974), two in the 1990s (July/Aug 1992 and 1995), and two in the 2010s (May/June 2014 and 2015). Our analyses followed a similar multivariate procedure to that outlined above.

Tissue metal concentrations: The tissue metal concentrations were log transformed prior to statistical analysis, as metals may accumulate with age, and length is related to age by a growth curve, usually of the form:

$$Length = Length_{\max} - \left(Length_{\max} - Length_{0.age.class}\right)e^{-Kt}$$

Where t is age and K is the instantaneous growth rate. Thus, where metal concentration is linearly correlated with age, it would be log-correlated with length. Therefore, length was included as a covariate in the analyses with log transformed metal as the dependent variable. Analysis of variance (ANCOVA) was conducted to test for significant differences between sites, with Post Hoc Tukey multiple-comparison tests used to determine which upstream control sites differed to downstream impacted sites. Data were also examined for significant interaction between metal concentration at sites and taxa length. All residual data were examined for having a normal distribution and homogeneity of variance prior to analysis.

The metal concentrations were compared with the Food Standards Australia New Zealand (FSANZ 2013) standards where appropriate.

3 RESULTS

3.1 Diatoms

3.1.1 Total abundance, taxonomic richness and community composition

Mean values of total abundance and taxonomic richness for each zone, year and month are displayed in Figure 3-1. Abundances varied significantly across sites for both June and September sampling rounds (one-way ANOVA, $P = 0.02$ and $P = 0.03$, respectively). Pairwise comparisons of the June dataset revealed EB@G-Dys (in zone 2) to have significantly higher abundance than EB@GS097 and EBusHS (zone 3) ($P > 0.05$). The September dataset revealed EBdsHS (zone 4) to have significantly higher abundances than EB@GS097 (zone 3) and EBusFR (zone 4) ($P < 0.05$). Taxonomic richness also showed significant differences for the June dataset ($P < 0.01$), but not for September ($P > 0.1$). Pairwise comparisons of the June dataset revealed multiple differences, with sites in zone 3 (EBdsRB, EB@GS097 and EBdsHS) eliciting significantly lower values relative to sites across zones 1 (FC@LB), zone 5 (FRusMB) and zone 6 (FRusFC).

Across years and sampling rounds, values were generally consistent, which is somewhat unexpected given the ephemeral nature of the East Branch system; particularly when comparing early and late dry season data for 2015. During the sampling period in September 2015 the dry season was particularly severe, with most of the upstream reaches of the East Branch having dried up (i.e. EB@LB, FC@LB and EB@G-Dys) and even Hanna's Spring ceasing to flow.

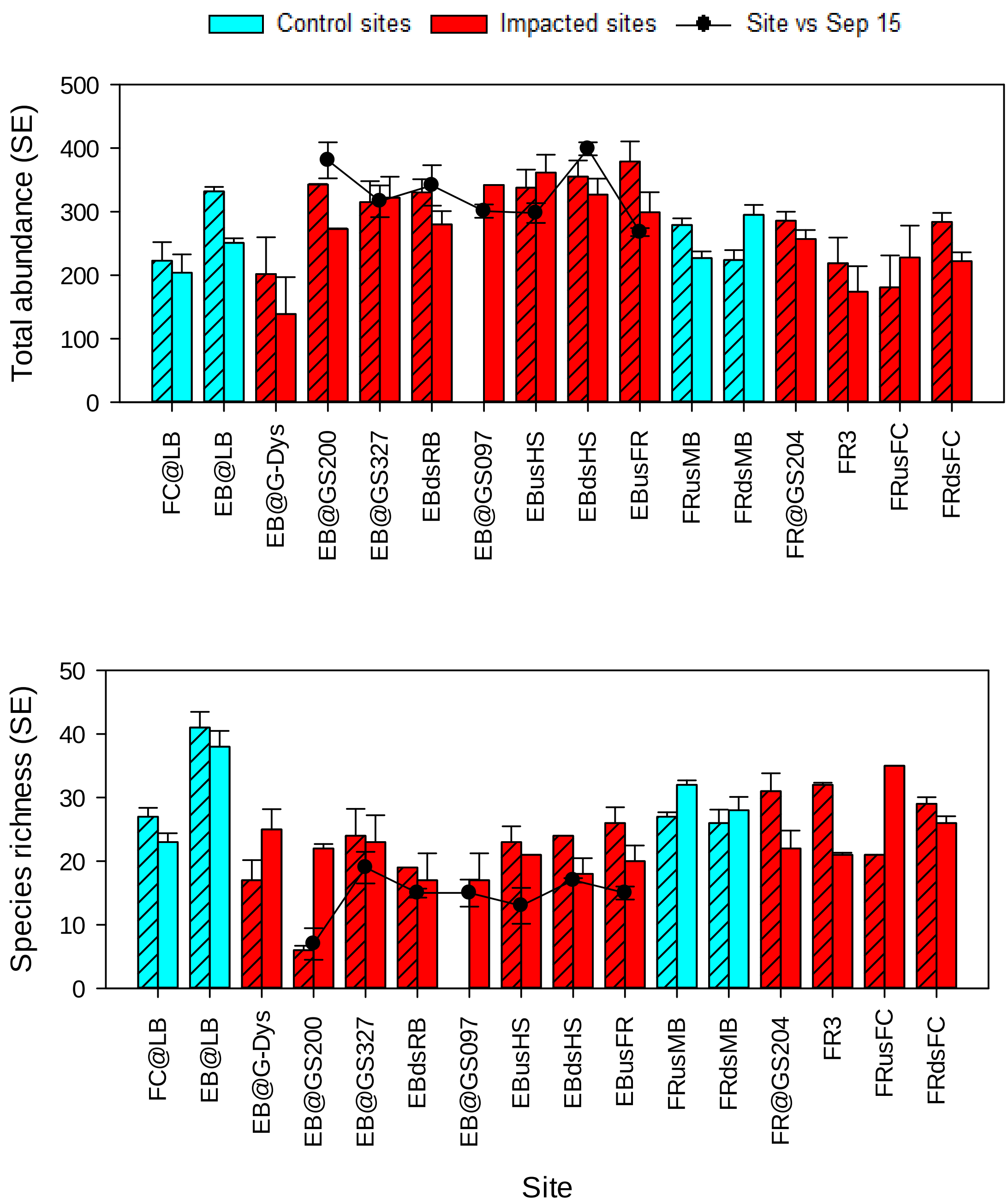

Figure 3-1 Total abundance (upper panel) and species richness (lower panel) across sites, years and sampling rounds. Hatched bars represent June 2014 data, empty bars represent June 2015 data, and black line represents Sep 2015 data

3.1.2 Community Compositions

With the combination of June 2014 and 2015 data for diatoms, an MDS plot (based on Bray-Curtis similarity) revealed samples to be generally grouped by zone, with a separation between downstream EB samples from those of the FR, irrespective of year (Figure 3-2). Results from a one-way ANOSIM revealed significant differences between zones overall (i.e. *P* =<0.05), and each pairwise comparison, except between zones 5, 6 and 7. To determine the species driving the similarities within zones and dissimilarities between zones, a SIMPER analysis was conducted (see Table 3-1). Zone 1 was characterised by *Sellaphora pupula* and *Synedra ulna*, and *Nitzschia frustulum* and *Gomphonema parvulum*; with each of these species being largely absent across the other zones. Little is known of these species as indicators of water quality, but their presence in this zone (with relatively good water quality conditions) and absence elsewhere, suggests that these may be positive indicators of good water quality. Zone 2 was characterised by *Achnanthidium minutissimum* and *Nitzschia palea*; species also known to be tolerant of elevated heavy metal concentrations (Silva-Benavides 1996, Cantonati et al. 2014). Zones 3 and 4 were likewise largely characterised by these species, but their contributions declined away from zone 2; and both species were largely absent from zones 5 and 6, but interestingly *A. minutissimum* was present and prominent in zone 7.

In analysing September 2015 sampling data for diatoms, an MDS plot did not reveal any clear partitioning of samples, nor were there any significant differences detected between zones (one-way ANOSIM, *P* = >0.05). However, some patterns did emerge from the SIMPER analysis (see Table 2-1B). Although both zones 3 and 4 were characterised by *Rhopalodia musculus*, zone 4 was also characterised by *Diadesmis confervacea*; a species largely absent from zone 3, and from the June dataset. Further, *Nitzschia filiformis* was a large contributor to the similarity in zone 3, but completely absent from zone 4. Little is known of the tolerances of each of the above species, except that *R. musculus* is regarded as alkaliphilous. It is therefore somewhat surprising that this species be so prominent on the EB.

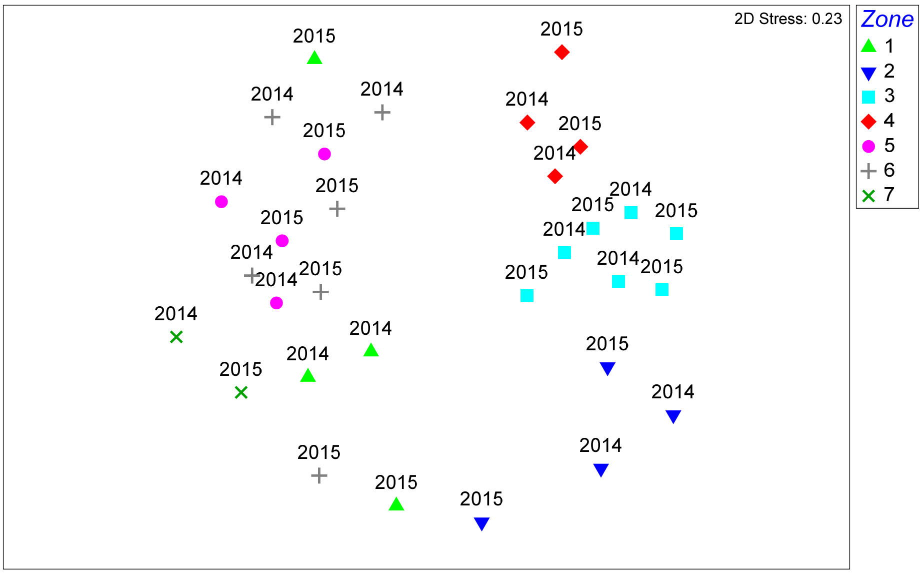

Figure 3-2 MDS plot of all June 2014 and 2015 samples, with samples labelled as: (A) year and branch; and (B) year and zone.

Table 3-1 Results of SIMPER analysis identifying the species responsible for the similarities within zones and the dissimilarities among zones for: (A) the combined June 2014 and 2015 datasets; and (B) September 2015 dataset.

(A) June 2014 and 2015	Zone (% contribution)						
Taxa	1	2	3	4	5	6	7
Sellaphora pupula	12.1						
Synedra ulna	9.8						
Nitzschia palea	9.2	24.8	19.8	21.3			
Nitzschia frustulum	7.3						
Gomphonema parvulum	6.3						
Nitzschia paleaceae	6.1						
Achnanthidium minutissimum		45.9	20.9		13.8		19.7
Rhopalodia musculus			27.3	15.7			
Nitzschia linearis				14.6			
Navicula menisculus					15.6	15.5	
Navicula schroeterii					12		
Encyonema silesiacum					9.8		
Navicula veneta						18.1	10.3
Nitzschia palea						12.2	
Navicula schroeterii						7.5	
Navicula radiosa							11.6
Navicula cryptotenella							9.9
Av. Similarity (%)	33.6	26.7	37.3	41.1	37.2	30.7	40.3

(B) Sep 2015	Zone (% contribution)	
Taxa	3	4
Rhopalodia musculus	40.1	27.3
Nitzschia filiformis	16.6	
Cyclotella stelligera	12.1	
Diadesmis confervacea		37.0
Av. Similarity (%)	38.4	33.4

3.1.3 Summary (Diatoms)

Diatoms which establish populations in a particular area are dependent upon different environmental factors: temperature, salinity, pH, flow, shading, availability of substrata, and chemicals in the water. Therefore, the species which can be found in a water body will inform about localised environmental characteristics and conditions. One species known to be a robust indicator of metal contamination is *Achnanthidium minutissimum*. This species showed a clear and obvious reduction in its abundance and its proportional contribution to communities further downstream of the mine. Indeed, it was not present in samples upstream of the mine and largely absent from zones 5 and 6 along the Finniss River. Other taxa, also noted as tolerant of high metal concentrations (e.g. *Nitzschia palea*), showed a similar pattern. These results appear to be very much in agreement with those of a study by Ferris et al (2002), focussing on sand-associated benthic diatoms, where a gradient of improving diatom condition was observed through the EB away from the mine lease. In contrast to the community data, values of total abundance and species richness were not particularly useful in determining differences among and between zones. It should also be noted that diatom communities were extremely variable, even among samples in close proximity and during the same sampling round.

3.2 Benthic macroinvertebrates

3.2.1 Total Abundance, Taxonomic and PET Taxa Richness

3.2.1.1 Contemporary assessment

May/June sampling 2014/15

Mean values of total abundance and taxonomic richness are displayed in Figure 3-3 and PET taxa richness are given in Figure 3-4. Across the region, abundances for May/June 2015 varied significantly across sites (Two-way ANOVA, P <0.001), but not across zones (*P* = 0.18). Values ranged from 237 (± 32.2) at FC@LB to just 13 (± 3.2) at EB@GS200. The largest differences were found between control sites in Zones 1 and downstream sites in zones 2 and 3, with pairwise comparisons revealing significantly greater values in both Zone 1 sites relative to each in Zone 2 (i.e. *P* <0.001). Compared to the 2014 sampling round, values were broadly similar, given that some level of natural variation would be expected, due to the ephemeral nature of the East Branch system. However, total abundances were noticeably low in Zone 6 for 2015 relative to 2014; and significantly so at site FR@GS204 (i.e. *P* < 0.05).

Values of taxonomic richness (at the family level) were also significantly different among sites (Two-way ANOVA, *P* = 0.001), but again not among zones (*P* = 0.12), with values ranging from 15.3 (± 2.2) at FRusMB to just 5 at EB@GS327. Pairwise comparisons revealed only one significant difference though, with the control site FC@LB being significantly greater than EB@GS327 (*P* < 0.05). However, several other site comparisons between years were very close to being significantly different (e.g. P < 0.07). Compared to the 2014 dataset, values were broadly similar, but for the exception of FRusMB, where richness was significantly higher in 2015 (T-test, P < 0.05). PET taxa richness generally varied (across sites) with taxonomic richness (see Figure 3-3). The only notable exception was site EBdsRB (in Zone 2 of the EB), where PET taxa were only a minor contributor to an already homogenous group.

3.2.1.2 Historical comparisons

Mean values of total abundance and taxonomic richness for 1995 data (extracted from Edwards (2002)), are plotted against 2014/15 data for corresponding sites in Figure 3. 3. In comparing these contemporary datasets with that of the investigation conducted some 20 years ago, it is clear that abundances were very different. This is largely explained by Edwards (2002) employing a finer mesh size (250 µm) than that employed here (500 µm, at the recommendation of Edwards pers. comm.); with the larger mesh size expected to collect fewer individuals from early life-history stages. This is what was observed, but the 2002 dataset was still useful to compare relative differences in abundances across sites and zones. There was good agreement between recent and historic datasets, particularly for taxonomic richness, where values appeared to directly correspond.

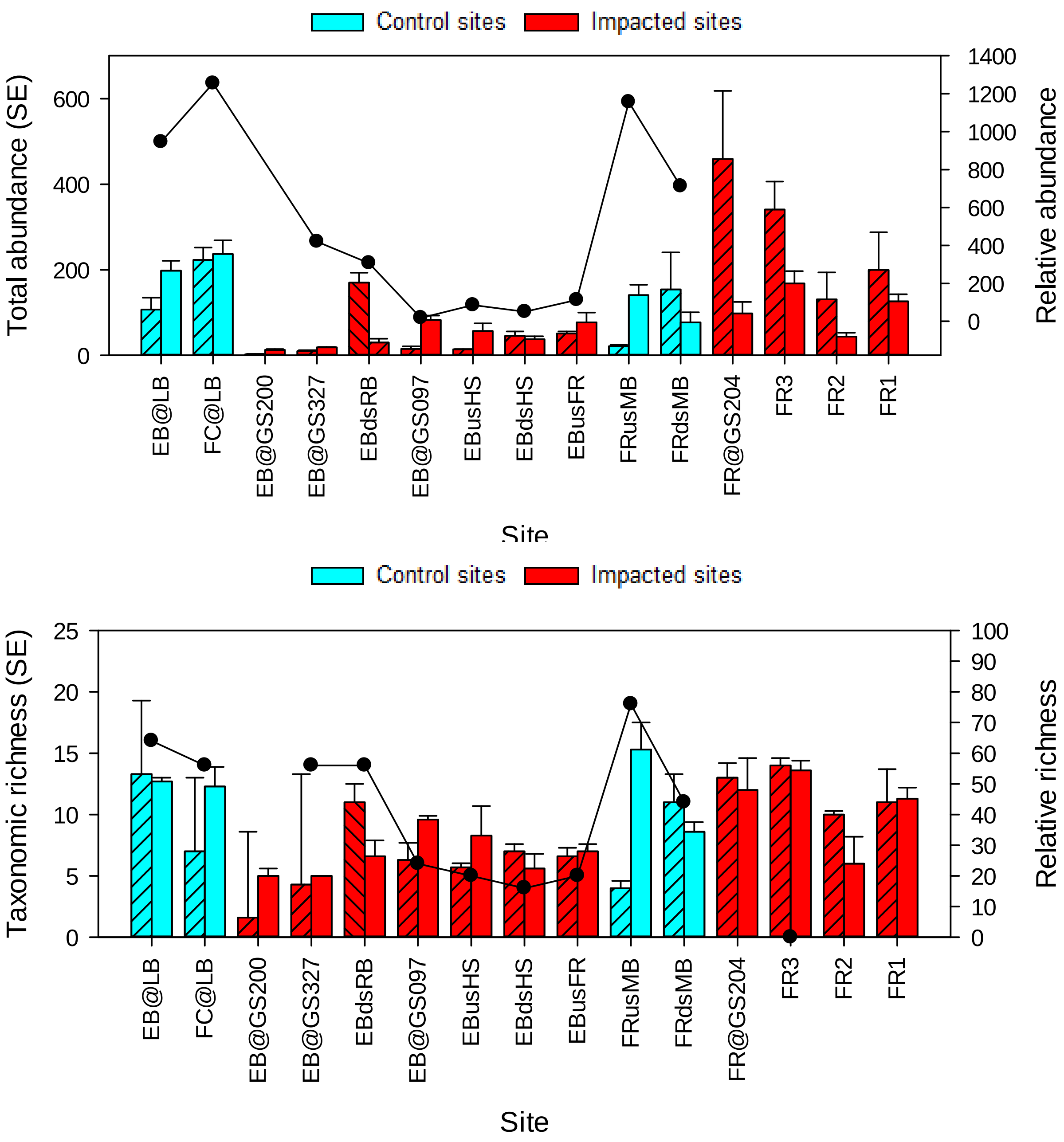

Figure 3-3 Mean values of total abundance (upper panel) and taxonomic richness (lower panel) across sites and sampling years (2014/2015). Hatched and open bars represent 2014 and 2015 data respectively. Black line = data from Edwards (2002)

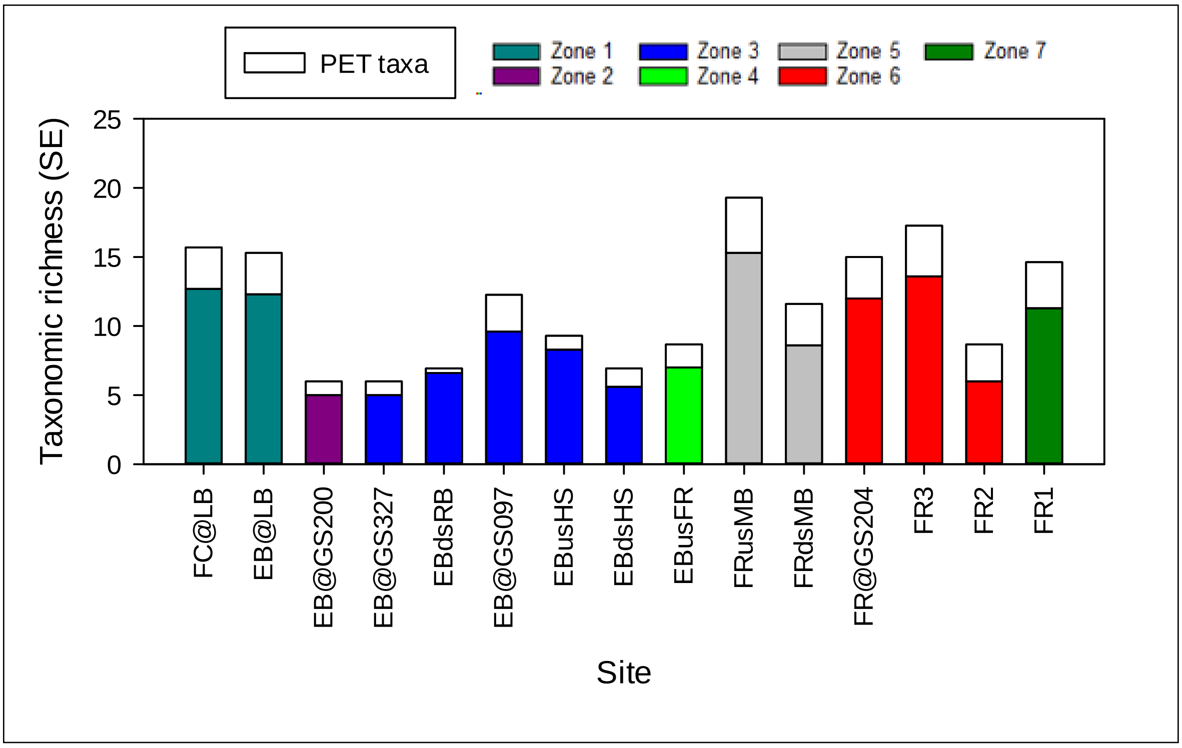

Figure 3-4 PET taxa richness across sites for May/June sampling

3.2.1.3 September sampling of the East Branch (2015)

Mean values of total abundance and taxonomic richness are displayed in Figure 3-5. Due to 2015 dry season being particularly severe, control sites upstream of the mine lease were dry, thus sampling was limited only to downstream sites. Both total abundance and taxonomic richness were significantly different across sites (One-way ANOVA, P <0.01), and appeared to show a gradient of lower values within and immediately downstream of the mine lease but progressively higher towards zone 4, where values again decreased. For abundance, EBusHS had significantly higher values than EB@GS200, EB@GS327 and EBdsRB (P < 0.05). These differences, however, are confounded by the fact that each site represented a different volume of water, and it is hard to differentiate their causes.

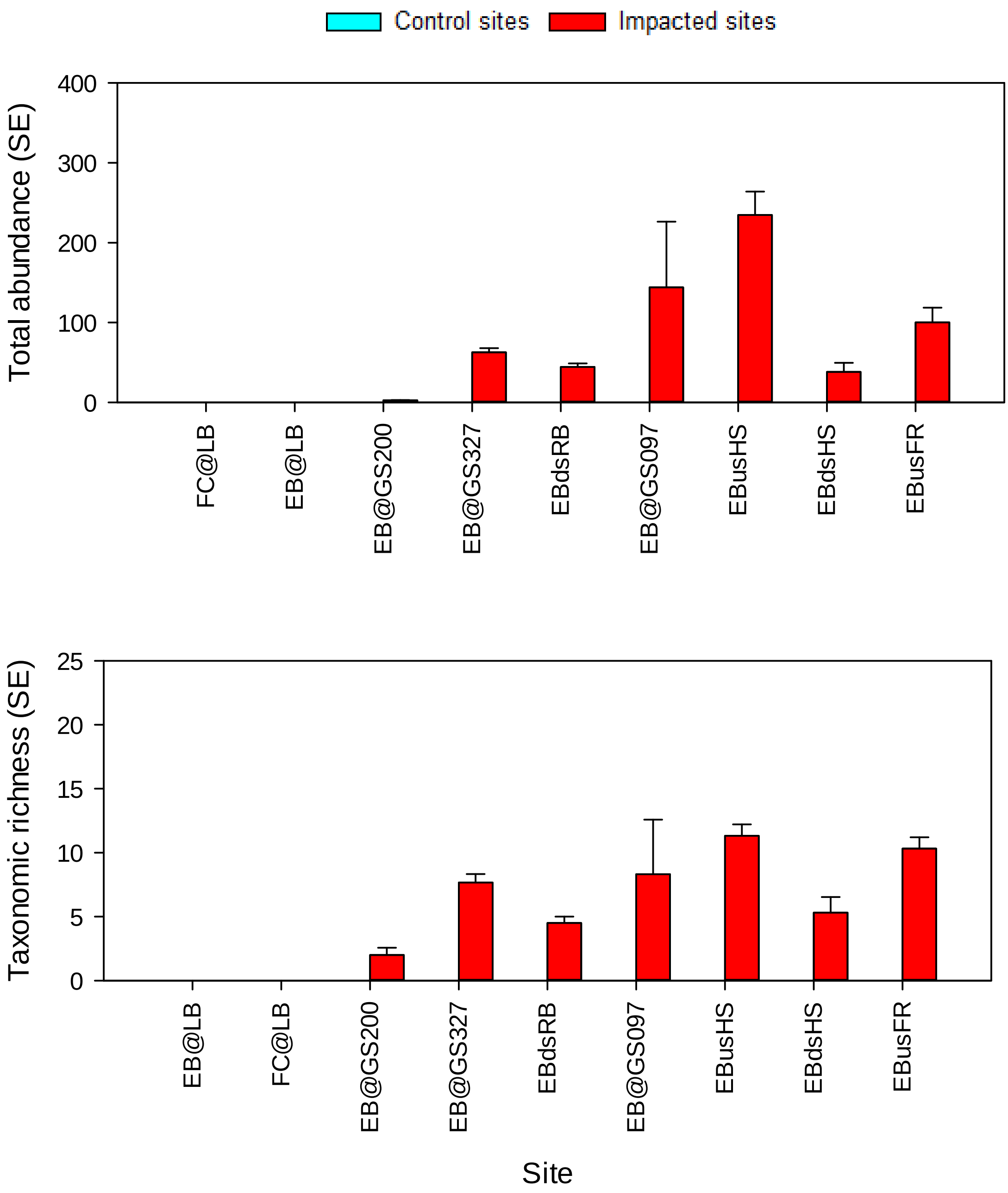

Figure 3-5 Mean total abundance (upper panel) and taxonomic richness (lower panel) across EB sites in Sep 2015

3.2.1.4 Community composition

A total of 37 macro-invertebrate families were identified across sites and zones for 2015, compared with 42 in 2014. Cluster analysis (using SIMPROF) of the 2015 dataset revealed four significantly distinct clusters (i.e. P <0.05); each represented within a corresponding MDS plot (Figure 3-6). Table 2-5 describes the proportional contribution of each taxon to the similarity within cluster groups. Cluster 1 was composed of a single site, FRusFC which was characterised by relatively few taxa, dominated by Caenidae (42%), Oligochaeta, Leptoceridae and Elmidae (~20%). Cluster 2 included a site each from zones 2 and 3 (EB@GS200 and EB@GS327), and was characterised by relatively low diversity but with high proportions of Tanypodinae (43%) and Chironominae (18%). Cluster 3 included eight sites from zones 1, 5, 6 and 7, and was characterised by a relatively high number and even spread of taxa. Families that typified cluster 3 were Caenidae, Chironominae and Tanypodinae, each contributing ~15-20% of the overall similarity. Cluster 4 included four sites, all from Zone 3 (EBdsRB, EB@GS097, EBusHS and EBdsHS) and was characterised by a narrow range of taxa, typified by the Chironominae and Copepods (~25% each).

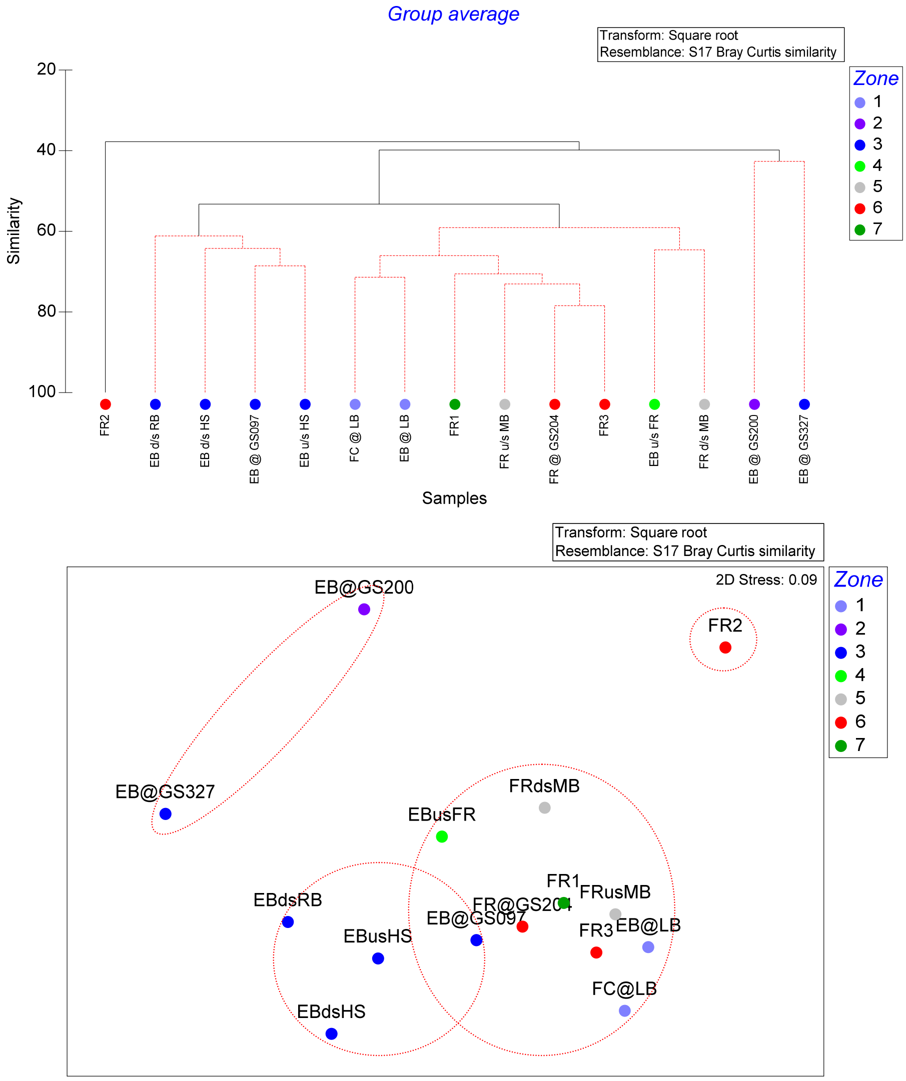

Figure 3-6 Cluster analysis (upper panel) and nMDS plot (lower panel) of macroinvertebrate communities. Red circles indicate significant cluster groups.

3.2.2 Historical Comparison

When the findings of the 2014 survey round are compared to the analysis carried out by Cyrus Edwards in 1995 for his Master's thesis some similarities were noted between data sets. The 1995 findings showed that there was a marked difference in abundance and richness and species composition between sites EBdsRB, EB@LB, FC@LB, FRusMB, FRdsMB and sites EBusFR, EBdsHS, EBusHS and EB@GS327. This same difference was also observed in the 2014 data set (see Hydrobiology, 2014).

The 1995 thesis also indicated that the most common taxa present in samples were the less sensitive taxa, Ceratopogonidae, Chironominae and Tanypodinae, although abundances of these taxa were low in samples taken from the East Branch sites at the time, whereas sites upstream of the lease boundary and the Finniss River had substantial amounts of these taxa present. Additionally the East Branch sites had very few or no Caenidae present whereas sites on the Finniss River and upstream of the lease boundary had representative of this Family present in notable numbers. A similar pattern of occurrence was found in the 2014 samples with regards to the distribution of the above mentioned taxa, and also their abundances at each site.

Furthermore, the presence of Ecnomidae, Baetidae, Nematoda and Orthocladiinae in significant numbers in the 1995 data set, set the sites in the Finniss River and upstream from the lease boundary apart from the sites affected by mine processes in the East Branch.

A difference between the 1995 and 2014 data sets was that, in 1995 sites on the Finniss River held large numbers of Dytiscidae beetles whereas the 2014 data set recovered very few of these from any site sampled.

The 1995 data set revealed that no Acarina, Chironomidae, Nematoda, Ecnomidae or Baetidae occurred at sites in the East Branch but all occurred in the Finniss River and at sites upstream of the lease boundary. This result differed from the findings of the 2014 survey as these taxa were found at several sites in the East Branch, albeit in very low numbers.

Results from ANOSIM analysis of the 1995 data performed by Cyrus Edwards showed that sites EB@LB and FC@LB differed from the other sites on the East Branch (i.e. sites EBusFR, EBdsHS, EBusHS, EBdsRB & EB@GS327) significantly, which was also found for the 2014 data.

Although results from the 2014 data set were generally similar to those found during 1995, there was also an indication that some improvement had occurred in macroinvertebrate assemblage condition in the East Branch. The occurrence of macroinvertebrate taxa previously not recorded in the East Branch as well as a trend of increasing PET taxa abundance downstream from site EB@GS200 indicated that the assemblages had improved, i.e. towards the taxonomic compositions of macroinvertebrates at control sites. However, macroinvertebrate abundance levels at the East Branch sites were not yet as high as those in the Finniss River and upstream of the lease boundary, although taxa richness levels were more similar.

There was one marked improvement to the geographic range of a group of macroinvertebrates that was noted during field sampling that while not quantitatively measured was noteworthy. Markich *et al.* (2002) reported that mussels were absent from the Finniss River for 10 km downstream of the East Branch junction. However in the 2014 sampling mussels were collected from FR@GS204 for radionuclide analysis, while it was not possible to collect them from any site in the East Branch downstream of the upstream boundary of the mine lease area. Mussels were not otherwise specifically targeted for sampling, but they were observed at all Finniss River sites downstream of FR@GS204. This indicates that there had been substantial recovery of the mussel populations in the main Finniss since the 1990s.

3.2.3 Summary (Macroinvertebrates)

The 2015 sampling data shows that sites within and immediately downstream of the mine lease (i.e. zones 2 and 3) had lower values of abundance and taxonomic and PET taxa richness than control sites upstream of the mine influence (Zones 1 and 5). The community assemblage at sites in zones 2, and several sites in zone 3, were also shown to be statistically distinct, and were typified by high proportions of less sensitive chironomids (midges). In contrast sites upstream of the mine lease, and at reference sites and sites downstream (in zones 4, 6 and 7) were composed of a more even spread of taxa, and high proportions of caenids (mayflies). The one exception to the above was site FRusFC (Zone 6), which was shown to be distinct from all other sites.

The overall patterns of abundance, richness and community composition recorded this year were broadly similar to last year's results, given that some level of natural variation would be expected due to the ephemeral nature of the East Branch system. A similar pattern of relative abundance and richness across zones to that observed by Edwards (2002) (also in May/June) was also observed.

3.3 Fish – Historical Comparisons

Figure 3-7 displays the two-dimensional nMDS plot of community composition for all samples from sites sampled in the main Finniss River across all sampling rounds. Samples are labelled according to their sample number shown in Table 3-2 and their impact status (i.e. impacted vs. unimpacted). Figure 3-8 displays the partitioning of samples into six significantly different clusters at the 55% similarity level, which have been superimposed onto Figure 3-7.

The nMDS plot shows community composition at impacted sites from the 1970s (pre remediation) to be clearly separated from most other sites, with most of these samples falling into two distinctive groups (with the exception of Nov samples). Samples from the 1990s and 2010s (irrespective of impact status) were more closely related and clustered. These patterns are further supported by the ANOSIM and SIMPER results (Table 3-3). Impacted sites in the 1970s were shown to be significantly different from corresponding control sites and impacted sites in the 1990s and 2010s (ANOSIM, $p = 0.01$). In testing for differences between impact and control sites within sampling decade, results revealed significant differences between groups in the 1970s ($p < 0.05$, dissimilarity ~63%) but not for the 1990s or the 2010s ($p > 0.05$, dissimilarities = 27 and 16%, respectively). These results appear to show that fish communities at impacted sites (zone 6), have progressed towards an unimpacted state.

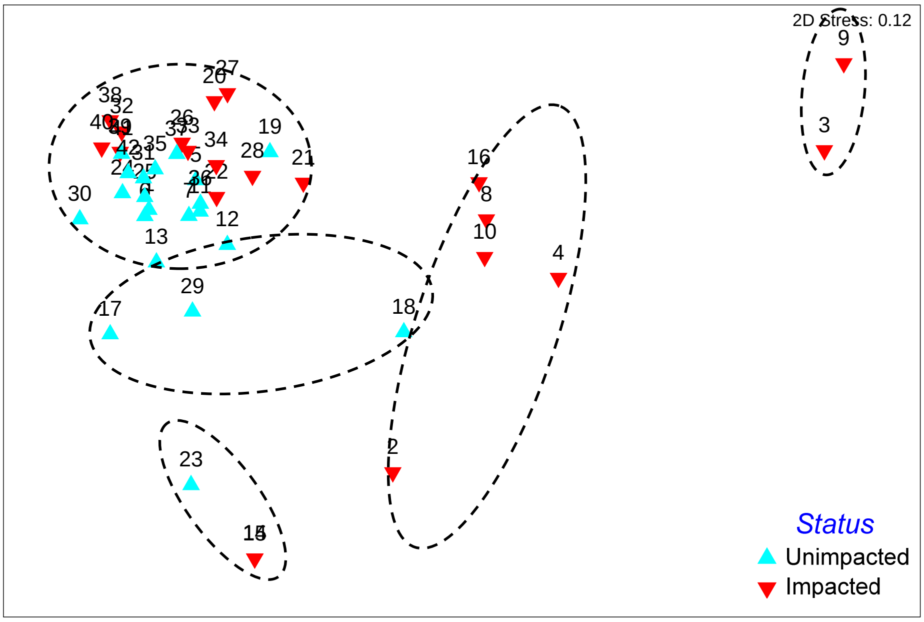

Figure 3-7 nMDS plot of community composition across sampling sites, impact status and years.

Table 3-2 Sample number reference for Figure 3-7 and 3-8.

	FRdsFC	FRusFC	FR3	FR@GS204	FRdsMB	FRusMB
Sampling period	Sample number					
Site (May/June 74)	1	2	3	4	5	6
Site (Aug/Sep 1974)	7	8	9	10	11	12
Site (Nov 74)	13	14	15	16	17	18
Site (Jul/Aug 92)	19	20	21	22	23	24
Site (Jul/Aug 95)	25	26	27	28	29	30
Site (May 2014)	31	32	33	34	35	36
Site (May 2015)	37	38	39	40	41	42

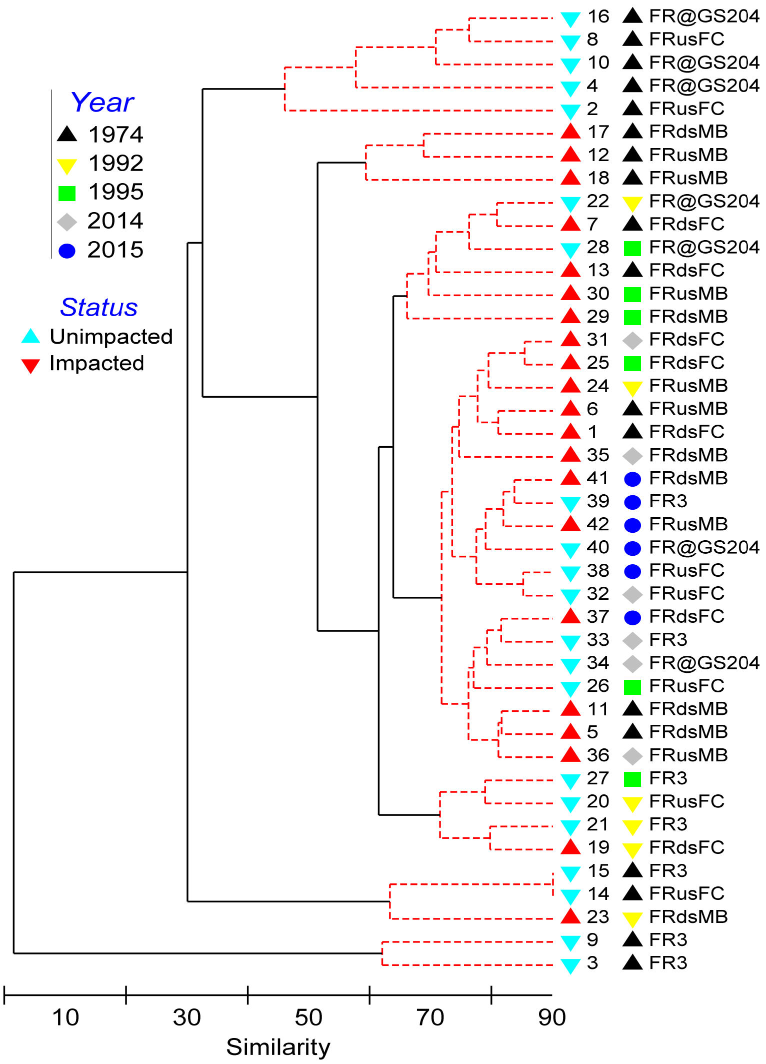

Figure 3-8 Cluster analysis of fish communities

Table 3-3 Results from SIMPER analysis. Identifies: (1) which taxa were principally responsible for similarities within groups; and (2) the average similarity within groups; and (3) dissimilarities between groups.

	Av. Abundance					
	1970s		1990s		2010s	
Taxa	Unimpacted	Impacted	Unimpacted	Impacted	Unimpacted	Impacted
Neosilurus spp.	2.05	1.31	2.41	2.12	2.32	2.05
Megalops	1.95	1.14	2.35	2.59	2.42	2.34
Black bream	1.49	0.65	0.43	0.46	1.7	2.4
Nematalosa	1.94	0.26	3.24	4.44	3.43	3.44
Amniataba	1.29	0.24	0.77	0.96	2.04	2.46
Toxotes spp.	0.98	0	0.69	1.08	1.66	2.22
Melanotaenia	0.61	0	0	1.41	0.39	0.51
Av. Similarity	76.1%	44.2%	68.9%	80.5%	84.1%	85.6
Dissimilarity	63.1%		27.3%		16.1%	

Figure 3-9 displays total abundance and taxonomic richness across sites, decades and impact status, and Table 3-4 gives the average abundance of each taxon within these groupings. Total abundance and taxonomic richness were clearly reduced at impacted sites relative to unimpacted sites pre remediation in the 1970s, but not for the 1990s or 2010s. In fact, both of these decades had higher abundances, although taxonomic richness was marginally lower at impacted sites. Overall, abundances at unimpacted sites have increased since the 1970s, but while this was also true for impacted sites, values in the 2010s were much reduced relative to the 1990s.

Table 3-4 Mean abundance of each taxon within each impact status group and sampling decade.

	Av. Abundance					
	1970s		1990s		2010s	
Taxa	Unimpacted	Impacted	Unimpacted	Impacted	Unimpacted	Impacted
Neosilurus	20.7	0.4	45.7	21.7	31.2	25.7
Megalops	18.8	7.9	33.8	48.3	38.7	34.4
Black bream	6.8	0.3	1.0	1.3	9.7	38.3
Nematalosa	34.8	3.4	202.7	459.0	174.4	154.8
Amniataba	5.3	0.0	2.8	3.3	35.7	57.0
Toxotes	3.2	0.0	2.3	11.3	9.2	25.8
Melanotaenia	0.9	7.0	1.3	5.3	0.6	1.9
Total. Av	90.4	19.1	289.7	550.3	299.5	338.0

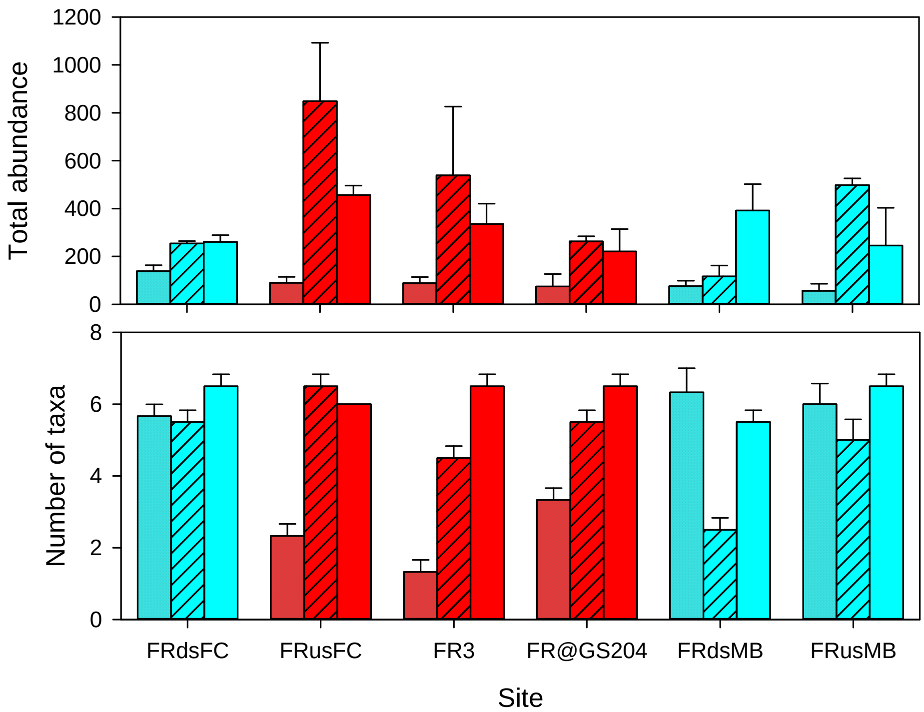

Figure 3-9 Total abundance and no. of taxa across sites and decades. Cross hatched bars represent 1970s, single hatched 1990s and clear bars 2010s. Red = impacted, and cyan = unimpacted

3.4 Summary (Historical comparisons of fish)

In this section, fish community composition, diversity and abundance at impacted sites on the Finniss River were compared with unexposed sites prior to remediation and ~10 (1990s) and ~30 years post remediation (2010s). Overall it was found that fish communities from sites downstream of mine inputs prior to remediation were significantly different from unexposed sites, being depleted in abundance and diversity. However, this was not the case for samples post remediation where there appeared to have been recovery of fish communities at the exposed sites in zone 6. There was clear evidence that impacted and unimpacted communities were more alike post remediation. Despite this observation, abundances at zone 6 were reduced in the most recent sampling rounds (2010s) relative to the 1990s. However, flow at this reach of the Finniss River is particularly variable and is likely to be a substantial confounding factor affecting abundances.

3.4.1 Fish Communities 2014-2015

3.5 May/June Sampling

Figure 3-10 and Figure 3-11 display the cluster analysis of community composition for Fyke and electrofishing samples. Samples are labelled according to their respective sample numbers, site names, river branch, and position (i.e. control vs. downstream of mine), as shown in Table 3-5. The SIMPROF routine identified four significant cluster groups for each fishing method, which are superimposed onto their respective MDS plots. The East Branch and Finniss River were shown to support significantly different communities, irrespective of sampling method or year. For Fyke nets, two further subgroups were identified within each branch; whereas for electrofishing the EB was separated into three groups. Table 3-6 displays the contribution of different taxa to the similarity within each cluster.

3.5.1 Fyke samples

For the Fyke samples, cluster 1 was composed of East Branch (EB) samples from zones 1, 2 and 3, including six downstream sites and all four control samples (i.e. EB@LB and FC@LB, 2014 and 2015). Each of these were characterised by a dominance of four taxa, *M. mogurnda*, *M. nigrans*, *M. splendida*, and *Ambassis macleayi* (contributing >95%) (See table 2-7). Interestingly, despite containing EB control samples, this group also contained the samples from EB@GS200 and EB@GS327, located either within or immediately downstream of the mine lease. Cluster 2 included East Branch samples downstream of those identified in cluster 1. These samples were composed of a broader spread of taxa contributing to their similarity, including relatively high contributions from *O. selhemi* and *N. ater* (~ 10% each).

Cluster 3 included all samples located in Zone 6 and one sample from Zone 5. Like cluster 2, these samples were characterised by a relatively broad spread of taxa, but contained high proportions of several taxa either absent or recorded in low numbers in other clusters, e.g. *C. stramineus* and *Glossogobius* sp. Cluster 4 contained samples from zones 5 and 7, including the control samples at FRdsMB and FRusMB, and were dominated by only three taxa, *M.*

nigrans, M. splendida, and *G. aprion*; the latter being only recorded in low numbers elsewhere. It is somewhat surprising that this cluster was composed of samples from zones 5 and 7, given that these zones are separated by zone 6.

3.5.2 Electrofishing

The electrofishing samples elicited a similar pattern to the Fyke samples, but clusters were not quite as clearly defined. Cluster 1 was composed of EB sites from zones 1 and 2, including three of the four reference samples and both EB@GS200 (2014/15) samples. These were largely dominated by two species: *M. bullatum* and *M. mogurnda* (>80%). Clusters 2 and 3 were composed mainly of samples from zones 3 and 4. Cluster 2, like cluster 1, also had high contributions from *M. bullatum* and *M. mogurnda*, but was also characterised by a more even spread of taxa, including a relatively high contribution of *N. hytlii*. Cluster 3 contrasted in that *M. bullatum* was absent and *G. aprion* was a relatively important component of this group. Cluster four included only Finniss River sites, with all samples sharing at least 70% similarity; and was composed of a far broader and diverse range of taxa.

Table 3-5 Details of sampling sites, their branch, position, zone and respective sampling number.

					2014	2015
Site number	Site	Reach	Zone	Status	Sample no.	
1	EB@LB	EB	1	Control	1	16
2	FC@LB	EB	1	Control	2	17
3	EB@GS200	EB	2	Downstream	3	18
4	EB@GS327	EB	3	Downstream	4	19
5	EBDSRB	EB	3	Downstream	5	20
6	EB@GS097	EB	3	Downstream	6	21
7	EBusHS	EB	3	Downstream	7	22
8	EBdsHS	EB	4	Downstream	8	23
9	EBusFR	EB	4	Downstream	9	24
10	FRusMB	FR	5	Control	10	25
11	FRdsMB	FR	5	Control	11	26
12	FR@GS204	FR	6	Downstream	12	27
13	FR3	FR	6	Downstream	13	28
14	FRusFC	FR	7	Downstream	14	29
15	FRdsFC	FR	7	Control	15	30

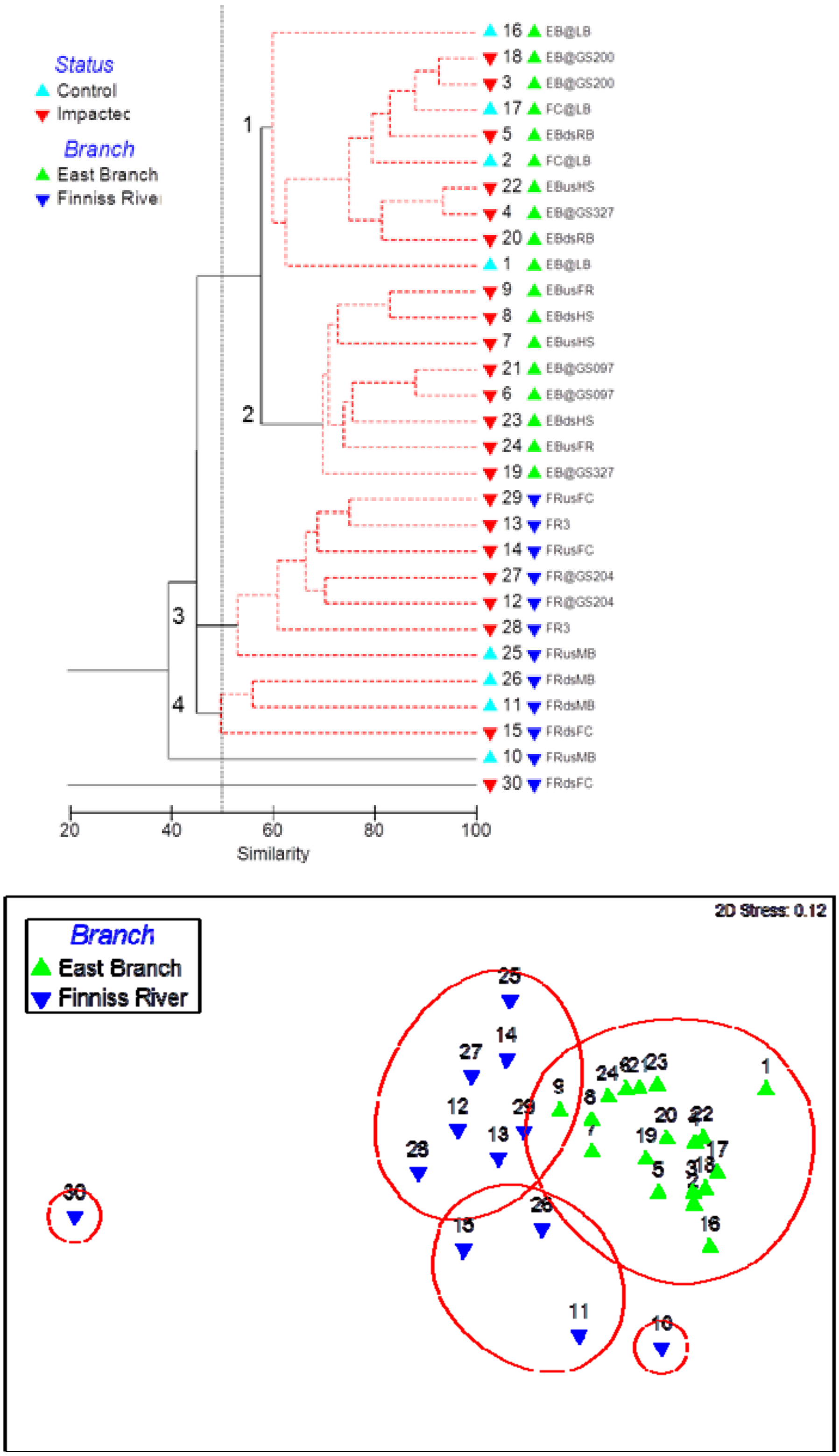

Figure 3-10 Cluster analysis (upper panel) and nMDS plot (lower panel) of fish communities from Fyke samples. Sampled are labelled by their respective sample numbers described in Table 3-5.

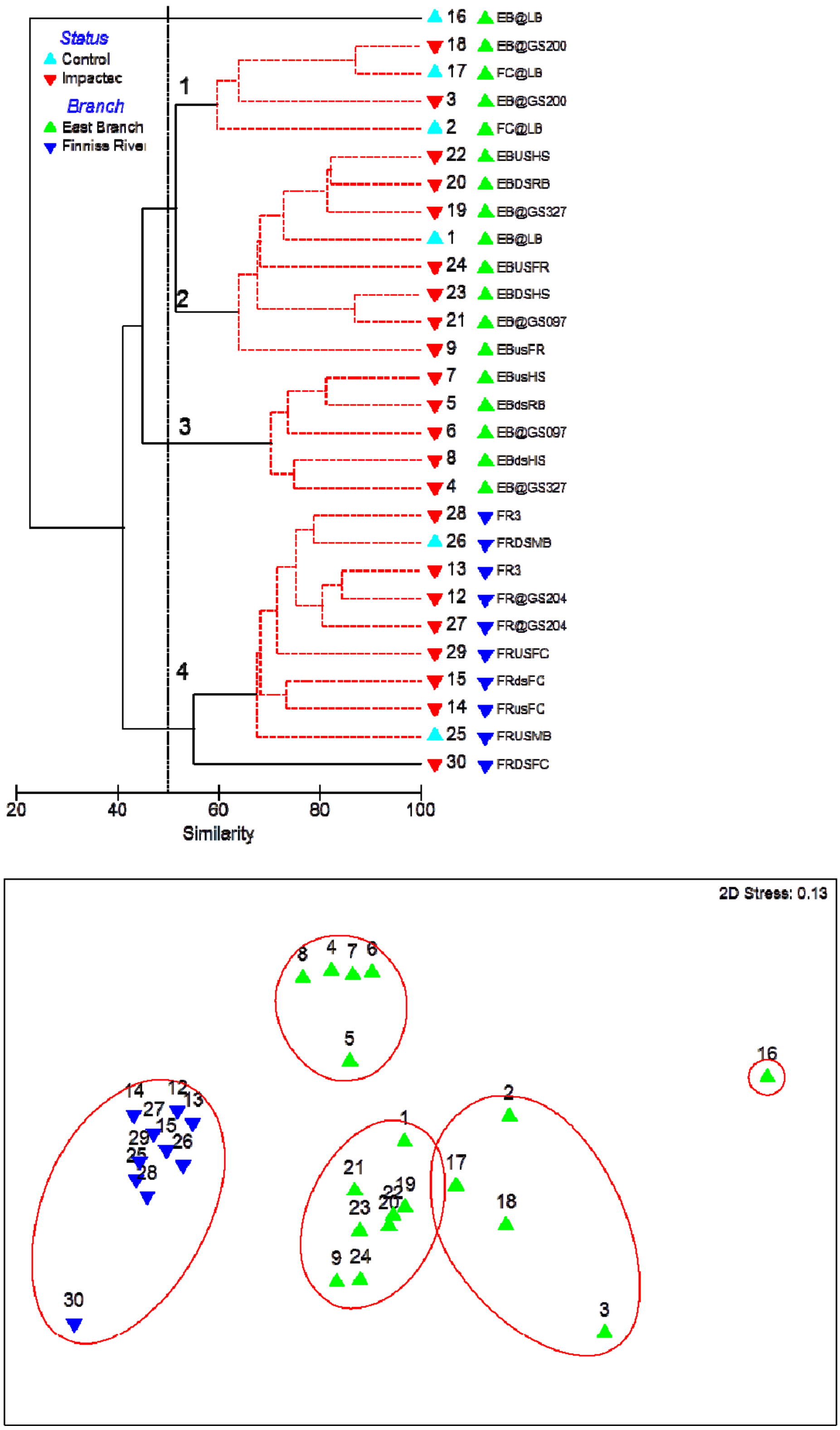

Figure 3-11 Cluster analysis (upper panel) and nMDS (lower panel) of fish communities from electrofishing samples. Samples are labelled according to their respective sampling number described in Table 3-5.

Table 3-6 Results from SIMPER analysis

Fyke nets	Cluster Group (% contribution)			
Taxa	1	2	3	4
Mogurnda mogurnda	31.87	20.28	16.65	8.23
Melanotaenia nigrans	28	11.04	8.53	28.34
Melanotaenia splendida	23.17	15.44	14.3	27.26
Ambassis macleayi	14.69	13.71	3.34	7.91
Neosilurus hyrtlii	2.02	8.87	1.56	
Glossamia aprion	0.26	6.14	3.94	28.26
Craterocephalus stramineus		0.29	21.61	
Glossogobius species 2.		1.89	12.46	
Neosilurus ater		9.58	5.46	
Hephaestus fuliginosus			3.56	
Lates calcarifer			3.14	
Oxyeleotris selhemi		10.27	1.99	
Leiopotherapon unicolor		1.69	1.84	
Megalops cyprinoides			1.62	
Craterocephalus stercusmuscarum		0.78		
Av. Similarity (%)	72.3	72.5	62.1	51.8
Electrofishing	**Cluster Group (% contribution)**			
Taxa	1	2	3	4
Macrobrachium bullatum	47.18	40.25		20.1
Mogurnda mogurnda	35.88	27.29	21.96	8.43
Melanotaenia splendida inornata	12.78	11.14	16.58	5.36
Melanotaenia nigrans	4.16	11.61	14.92	5.33
Caridina gracilirostris				16.43
Macrobrachium handschini		0.48	36.53	15.92
Caridina typus				13.22
Glossogobius species 2.		0.41		5.02
Macrobrachium spinipes				2.15
Hephaestus fuliginosus				1.9
Neosilurus ater		0.29		1.67
Glossamia aprion			7.73	1.28
Oxyeleotris selhemi		0.29		0.58
Leiopotherapon unicolor		1.08		0.51
Cherax quadricarinatus		0.4		0.5
Craterocephalus stramineus				0.48
Neosilurus hyrtlii		6.47	1.2	0.47
Caridina cf longirostris				0.29
Ophisternon gutturale				0.19

Amniataba percoides				0.18
Ambassis macleayi		0.29	1.08	
Av. Similarity (%)	75.3	73.2	68.1	61.0

3.5.3 Fish distributions

Table 3-7 shows the distribution of taxa across sites for the 2014 and 2015 sampling rounds. In the EB, taxonomic richness clearly increased with distance downstream from the mine lease. The only teleost taxa consistently recorded within or upstream of the mine lease were *Mo. mogurnda*, *Melanotaenia nigrans* and *Me. splendida* (rainbowfish) and *A. macleayi*. Each species have wide physiochemical tolerances, and are known to inhabit a range of environments (Jeffree & Williams 1980, Cheng et al. 2010). In particular, a genetic study of *Melanotaenia* sp. (rainbowfish) within the EB of the Finniss River showed that these fish have adapted to pollution levels that would normally be toxic (see Hortsman, 2002). However, while this may have been true in the past, this does not appear to be the case now, as patterns of metal bioaccumulation that are indicative of metal exclusion are not evident (see Hydrobiology, 2014).

In addition to those taxa described above, a further 14 species were recorded in the EB but downstream of the mine lease. Most of these are likely to have simply dispersed a short way into the EB, but some may have migrated further upstream, if not blocked by a reduction in water quality. For example, the black catfish *N. ater* and the mouth almighty *G. aprion*, which are known to migrate to intermittent streams and pools (refs) were absent in zones 1 and 2 in 2015. For *N. ater*, this contrasted with 2014, which had a higher-flow wets season than 2015, whereupon this species migrated to and spawned in zone 1.

Table 3-7 Species of fish recorded at each site in 2014 and 2015. Blue shading highlights diadromous species. Highlighted cells (yellow, EB and green, Finniss River) highlight differences between years.

		2015															2014														
		East Branch									Finniss						East Branch									Finniss					
		FC@LB	EB@LB	EB@GS200	EB@GS327	EBdsRB	EB@GS097	EBusHS	EBdsHS	EBusFR	FRusMB	FRdsMB	FR@GS204	FR3	FRusFC (FR2)	FRdsFC (FR1)	FC@LB	EB@LB	EB@GS200	EB@GS327	EBdsRB	EB@GS097	EBusHS	EBdsHS	EBusFR	FRusMB	FRdsMB	FR@GS204	FR3	FRusFC (FR2)	FRdsFC (FR1)
FISH	**English Name**																														
Ambassis macleayi	Macleay's perchlet	X		X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Melanotaenia nigrans	Black-banded rainbowfish	X	X	X	X	X	X	X	X	X	X	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Melanotaenia splendida inornata	Eastern rainbowfish	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mogurnda mogurnda	Northern trout gudgeon	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X	X	X	X	X	X	X	X			X	X	X	X
Neosilurus hyrtlii	Hyrtl's tandan				X	X	X	X	X	X	X	X	X	X	X	X				X		X	X	X	X	X	X			X	X
Glossamia aprion	Mouth-almighty					X	X	X	X	X		X		X	X						X	X	X	X	X	X	X	X	X		X
Neosilurus ater	Black catfish, Narrow-fronted tandan				X		X	X	X	X	X	X	X	X	X	X		X		X		X	X	X	X	X	X	X	X	X	X
Oxyeleotris selhemi	Giant gudgeon, sleepy cod				X		X	X	X	X	X		X		X							X	X	X	X	X					
Glossogobius species 2.	Munro's goby, Square blotch goby							X		X			X	X	X	X				X		X		X	X			X	X	X	X
Megalops cyprinoides	Tarpon, Oxeye herring				X	X	V	X	X	X	X	X	X	X	X	X				X		X			X	X	X	X	X	X	X
Leiopotherapon unicolor	Spangled grunter				X		X		X	X	X				X	X				X		X			X					X	X
Craterocephalus stercusmuscarum	Fly-specked hardyhead						X															X		X	X	X	X				
Oxyeleotris lineolata	Sleepy cod																						X		X				X		
Lates calcarifer	Barramundi									X	X	X	X	X									X		X	X	X	X	X	X	X
Craterocephalus stramineus	Strawman										X		X	X	X										X			X	X	X	
Amniataba percoides	Banded grunter				X					X	X	X	X	X	X	X				X					X	X	X	X	X	X	X
Strongylura krefftii	Freshwater longtom									X	X	X	X	X	X	X									X	X	X		X	X	X
Hephaestus fuliginosus	Sooty Grunter, Black bream										X	X		X	X	X									X	X	X	X	X	X	X
Porochilus rendahli	Rendahl's catfish								X																						
Neoarius berneyi	Berney's catfish, groove-snouted catfish																												X	X	X
Neoarius graeffei	Lesser salmon catfish											X		X												X	X	X			X
Glossogobius giurus	Flathead goby										X															X					
Liza vaigiensis	Diamond-scaled mullet																										X				
Ophisternon gutturale	Swamp eel								X																			X		X	
Nematalosa erebi	Bony bream									X	X	X	X	X	X	X										X	X	X	X	X	X
Syncomistes butleri	Butler's grunter										X	X	X	X	X	X										X	X	X	X	X	X
Toxotes chatareus	Seven-spot archerfish										X	X	X	X	X	X										X	X	X	X	X	X
Toxotes lorentzi	Primitive archerfish																													X	
Pingalla sp.A (Finniss Grunter?)	Finniss Grunter														X	X															
CRUSTACEANS																															
Caradina gracilirostrus	Graceful brush-clawed shrimp										X	X	X	X	X	X										X	X	X	X	X	X
Caradina typus	Striped brush-clawed shrimp										X	X	X	X	X	X												X	X	X	X
Caridina cf. longirostris	Long-rostrum brush-clawed shrimp																													X	X
Macrobrachium bullatum	Bullat's freshwater prawn	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X	X		X	X			X	X	X	X
Macrobrachium handschini	Handschin's freshwater prawn										X		X	X	X	X	X	X		X	X	X	X	X	X	X		X	X	X	X
Macrobrachium spinipes	Cherabin, Giant freshwater prawn										X	X	X	X	X																
Cherax quadricarinatus	Redclaw					X			X	X	X	X		X	X					X		X	X		X						X
Austrothelphusa transversa	Freshwater crab	X	X					X									X	X	X												

3.5.4 Fyke and Electrofishing abundance and richness

3.5.4.1 Fyke samples

Total abundance and taxonomic richness are displayed in Figure 3-12 and Figure 3-13. **Abundances:** A two-way ANOVA revealed significant differences in fish abundances across sites (p = <0.01), but not years; nor were there any dependencies (interactions) between factors. **Taxonomic richness:** Taxonomic richness did not vary significantly across sites or years (p = >0.05). Therefore, the 2014 and 2015 data from each site were pooled to increase the sample size and statistical power in a simple one-factor analysis, testing for differences among and between sites. In doing so it was found that abundances were still significantly different across sites (p = <0.01), but not so for taxonomic richness (P = 0.29). Abundances were generally higher in the EB relative to the Finniss River and pair-wise comparisons revealed significantly higher values upstream at the control site EB@LB relative to all other sites ($p < 0.01$).

3.5.4.2 Electrofishing samples

Abundances: A one-way ANOVA revealed significant differences in abundance among sites (with values pooled across years) (P = 0.01). In contrast to Fyke samples, upstream control sites on the EB recorded relatively low values, but the lowest values recorded were within the mine lease at EB@GS200. Pairwise comparisons revealed FC@LB (zone 1) and EB@GS200 (zone 2) to have significantly lower values than FRusFC and FR@GS204 in zone 6 ($P < 0.05$), but values were relatively similar elsewhere. **Taxonomic richness:** Significant differences among sites were also detected for taxonomic richness (Krustal-Wallace, P = 0.04); but none of the pairwise comparisons were shown to be significantly different. However, visual inspection of the plots showed marginally higher values across the Finniss River relative to the EB; and with values in the EB steadily increasing downstream. Clearly these two methods and datasets indicate different patterns in fish abundance.

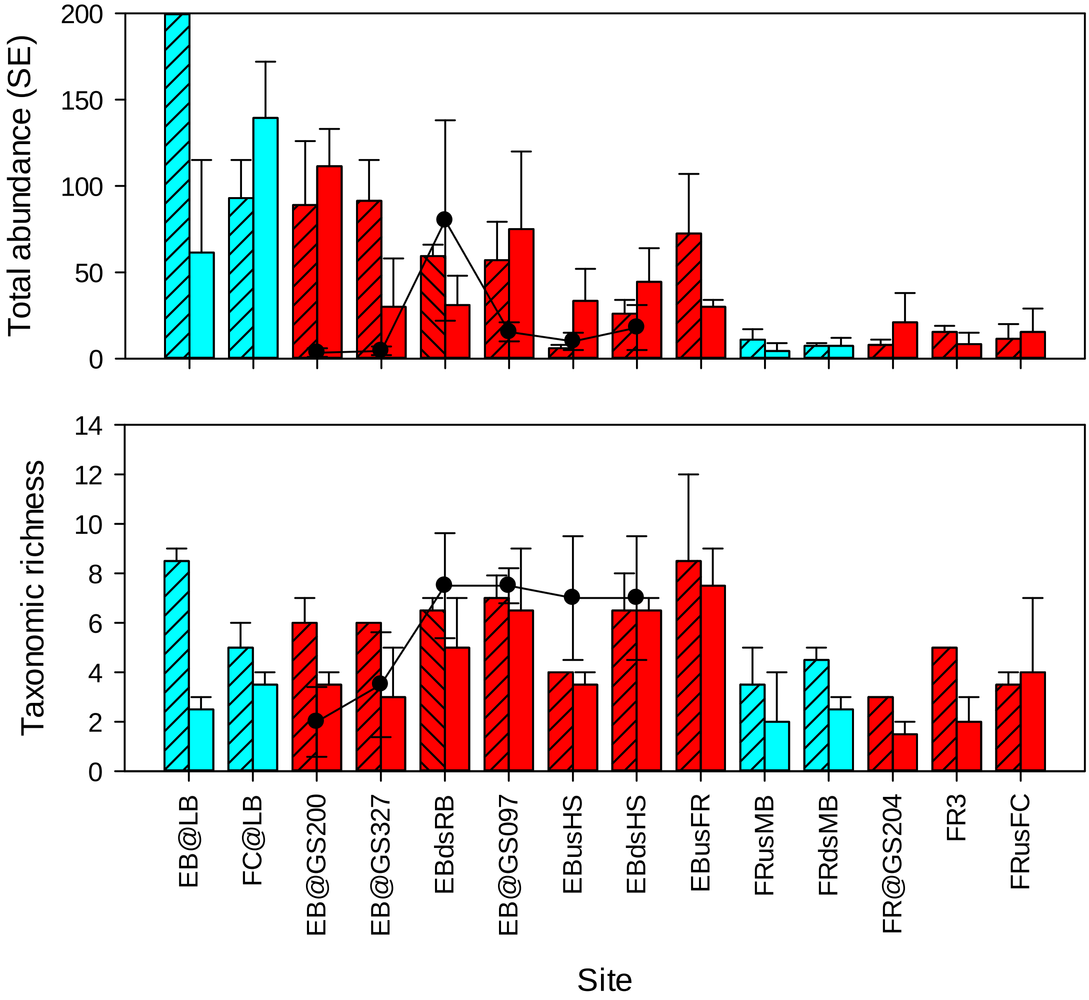

Figure 3-12 Fyke samples: Total abundance (upper panel) and taxonomic richness (lower panel) across sites and years. Hatched bars represent 2014 data and empty bars 2015 data. Line plot represents Sep 2015 data. Cyan = upstream control sites and red = downstream sites

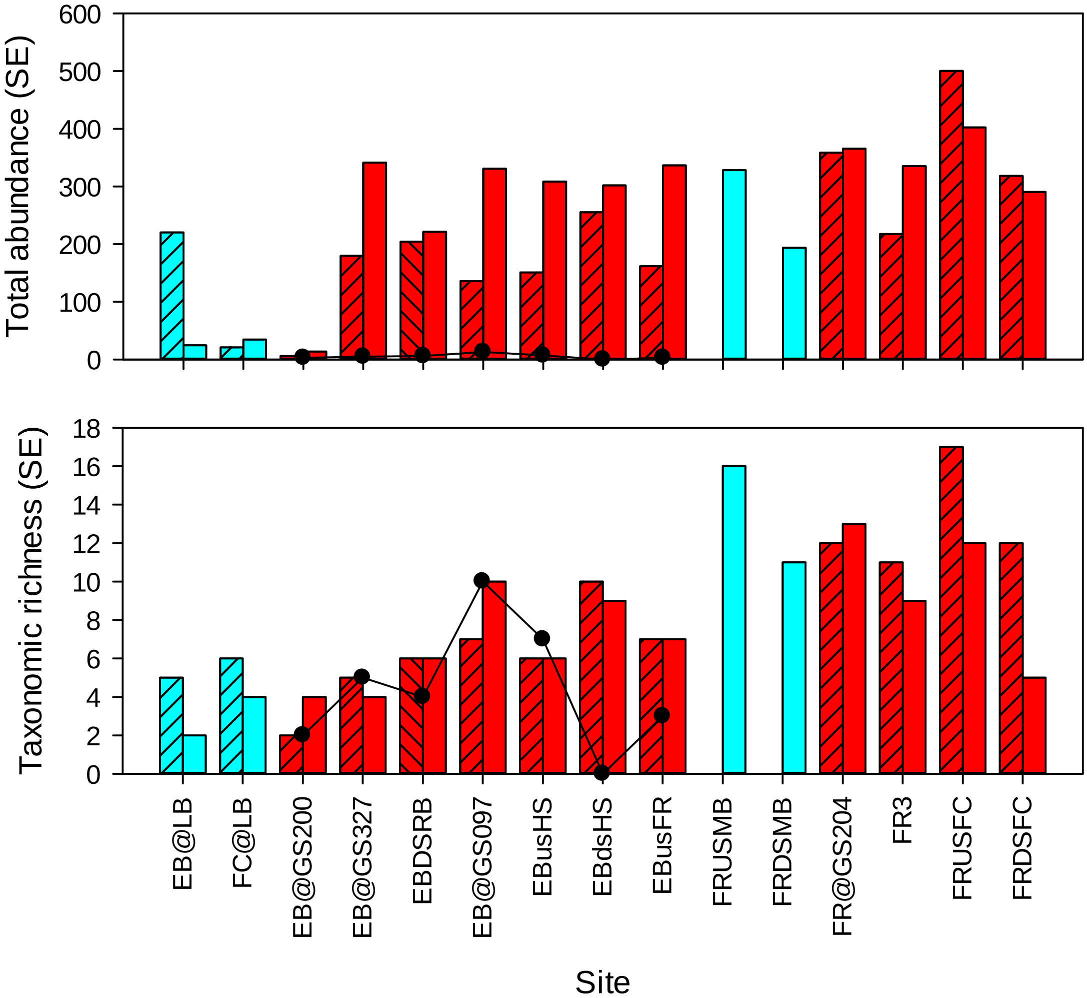

Figure 3-13 Electrofishing: Total abundance (upper panel) and taxonomic richness (lower panel) across sites. See Figure 3-12 for a description of symbols.

3.5.5 Comparison between May/June and September sampling in the East Branch

Figure 3-12 and Figure 3-13 display the total abundance and taxonomic richness of fish collected in September for Fyke nets and electrofishing (plotted against May/June samples). Figure 3-14 displays the cluster analysis of community composition for the same datasets.

September sampling occurred at the end of a particularly severe dry season. As a result, the EB was fragmented throughout. Indeed both sites in zone 1 (EB@LB and FC@LB) and one site in zone 2 (EB@G_Dys) were completely dry, and only small contracted and isolated pools were sampled across all remaining sites. Interestingly, water volume did not increase downstream, with EBdsRB and EBusHS (in zone 3) representing large pools relative to other sites (even in zone 4). Unsurprisingly total fish abundance and species richness were highest at the sites with the largest water bodies for both sampling methods. An assessment of the fish communities revealed large seasonal changes across all sites (for each method), but for the exception of EBdsRB Fyke samples (which retained >70% of the June community) (Figure 2-13).

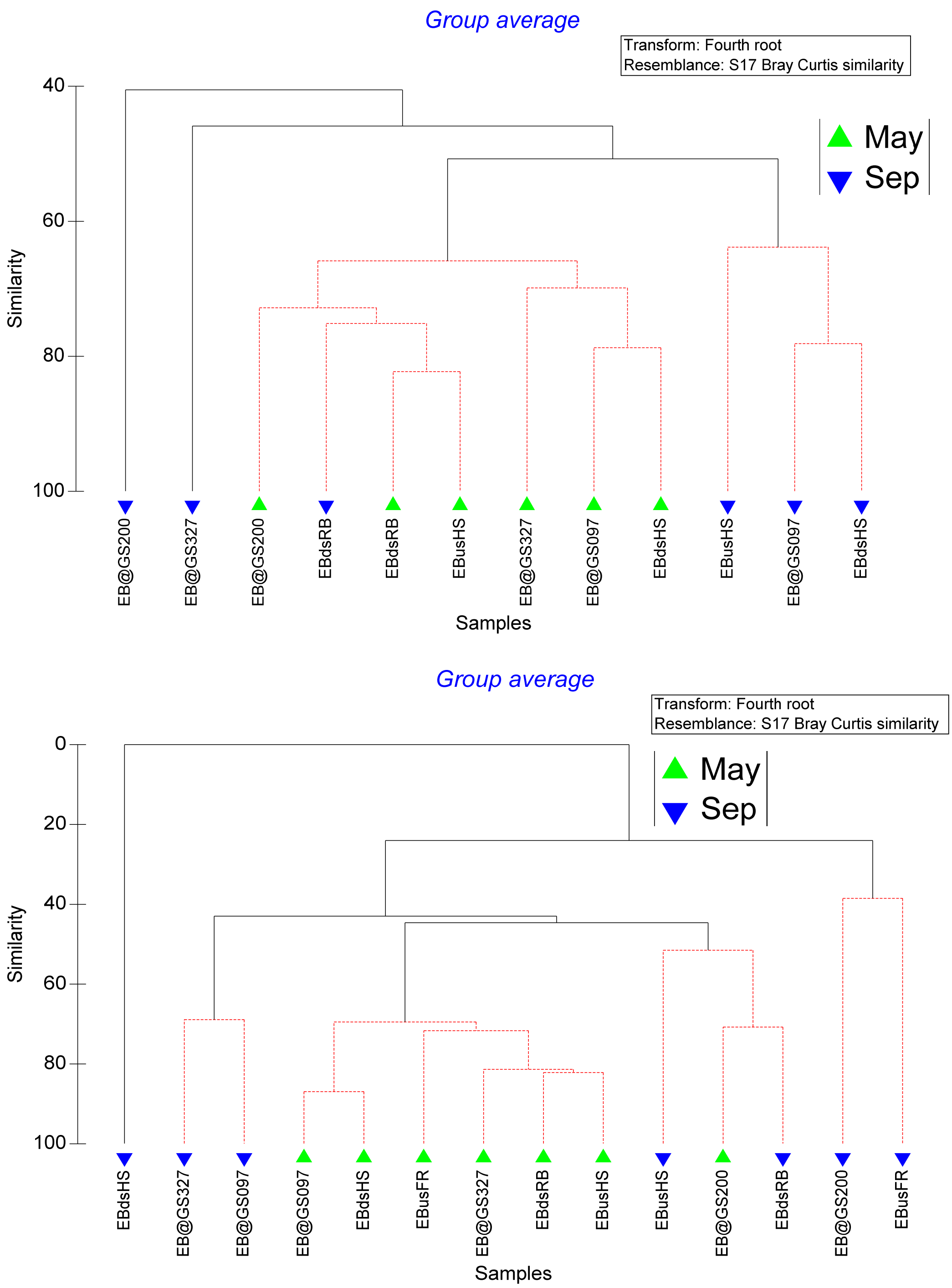

Figure 3-14 Cluster analysis of Fyke samples (upper panel) and electrofishing samples (lower panel) September samples with corresponding May/June samples.

3.5.6 Summary (Fish Communities 2014-2015)

Contrasting patterns of total abundance and richness between Fyke nets and electrofishing methods was observed. The Fyke net data showed abundances to be generally higher in the East Branch relative to the Finniss River, and the upstream control site EB@LB contained significantly higher abundances than all other sites. However, this was not reflected in species richness, as values across sites were reasonably similar (and not significantly different). Electrofishing, however, revealed a highly contrasting dataset. Abundances were particularly low upstream of the EB (zone 1) and within the mine lease (zone2), with consistently higher values across all other sites; whereas richness values were more consistent across EB sites (~7), but generally lower than the Finniss River (~10).

Analysis of the community composition identified a far greater similarity between datasets. Results from both methods revealed the EB and Finniss River to be composed of distinctively different communities; but neither resulted in a clear distinction between up and downstream sites within each branch (e.g. EB or Finniss River).

3.6 Tissue metals

3.6.1 Spatial comparisons

The concentrations of metals in each tissue type were examined for spatial (between zone and site) differences, either for increased bioaccumulation at sites near the mine or for suppressed bioaccumulation at downstream sites as noted by Jeffree *et al.* (2014). Table 3-8 describes which species/tissues were sampled at which site and the number of samples collected.

Table 3-8 Tissue-metal sampling design. Numbers represent replicates of each species at each site

	Macrobrachium bullatum	*Melanotaenia nigrans*	*Mogurnda mogurnda*	*Nematalosa erebi*	*Neosilurus hyrtlii*
	Cephalothorax	Whole body	Hind body	Flesh	Flesh
FRusMB	2	1	1	5	4
FRdsMB	4		1	5	5
EB@LB	2	1	4		
FC@LB	5	4	5		
EB@GS200		3	5		
EB@GS327	5	3	5		5
EB@RB	5	5	5		2
EB@GS097		4	5		3
EBusHS	5	5	5		5
EBdsHS	5	5	5		2
EBusFR	5		5	5	5
FR@GS204	5	3	2	5	
FR3	5				5
FRusFC	5	5	5	5	
FRdsFC	5			5	2

Table 3-9 and Figure 3-15/16 describe metals, sites and species where significant differences were detected between downstream sites with upstream control sites. Figure For *M. bullatum*, the only metals which showed significantly elevated concentrations at downstream sites relative to background control sites, where lead and manganese (zone 4 sites) and nickel (zones 2-4). Both *M. nigrans* and *M. mogurnda* showed significantly higher concentrations of cobalt at zone 2 sites; while *M. mogurnda* also showed significantly higher concentrations of lead in zone 4.

Table 3-9 Summary of significant differences in tissue metal concentrations between downstream sites with each upstream control site.

M. bullatum					
Lead	Site	Length*Site	EB@LB	FC@LB	FrusMB
Overall test	*P* < 0.001	Not sig.			
EBdsHS			✔	✔	✔
Manganese	Site	Length*Site	EB@LB	FC@LB	FrusMB
Overall test	*P* < 0.001	Not sig.			
EBusFR			✔	✔	✔
Nickel	Site	Length*Site	EB@LB	FC@LB	FrusMB
Overall test	*P* < 0.001	Not sig.			
EB@GS327			✔	✔	✔
EBdsRB			✔	✔	✔
EBdsHS			✔	✔	✔
FRusFC			✔	✔	✔
M. nigrans					
Cobalt	Site	Length*Site	EB@LB	FC@LB	FrusMB
Overall test	*P* = 0.001	Not sig.			
EB@GS200			✔	✔	✔
EB@GS327			✔	✔	✔
EBdsRB			✔	✔	✔
EBusHS			✔	✔	✔
M. mogurnda					
Cobalt	Site	Length*Site	EB@LB	FC@LB	FrusMB
Overall test	*P* > 0.001	*P* > 0.001			
EB@GS200			✔	✔	✔
Lead	Site	Length*Site	EB@LB	FC@LB	FrusMB
Overall test	*P* > 0.001	Not sig.			
EBdsHS			✔	✔	✔

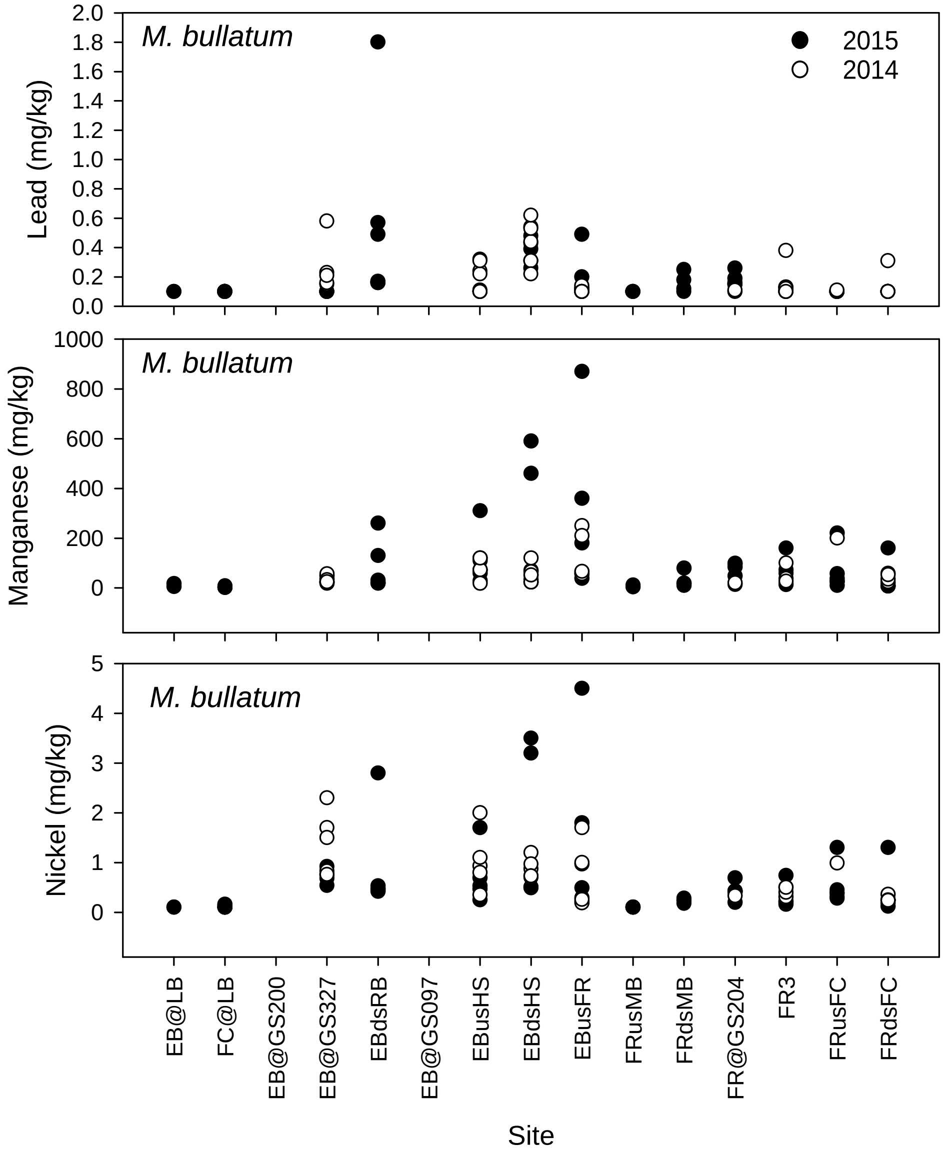

Figure 3-15 Concentrations of selected metals in *M. bullatum* by site

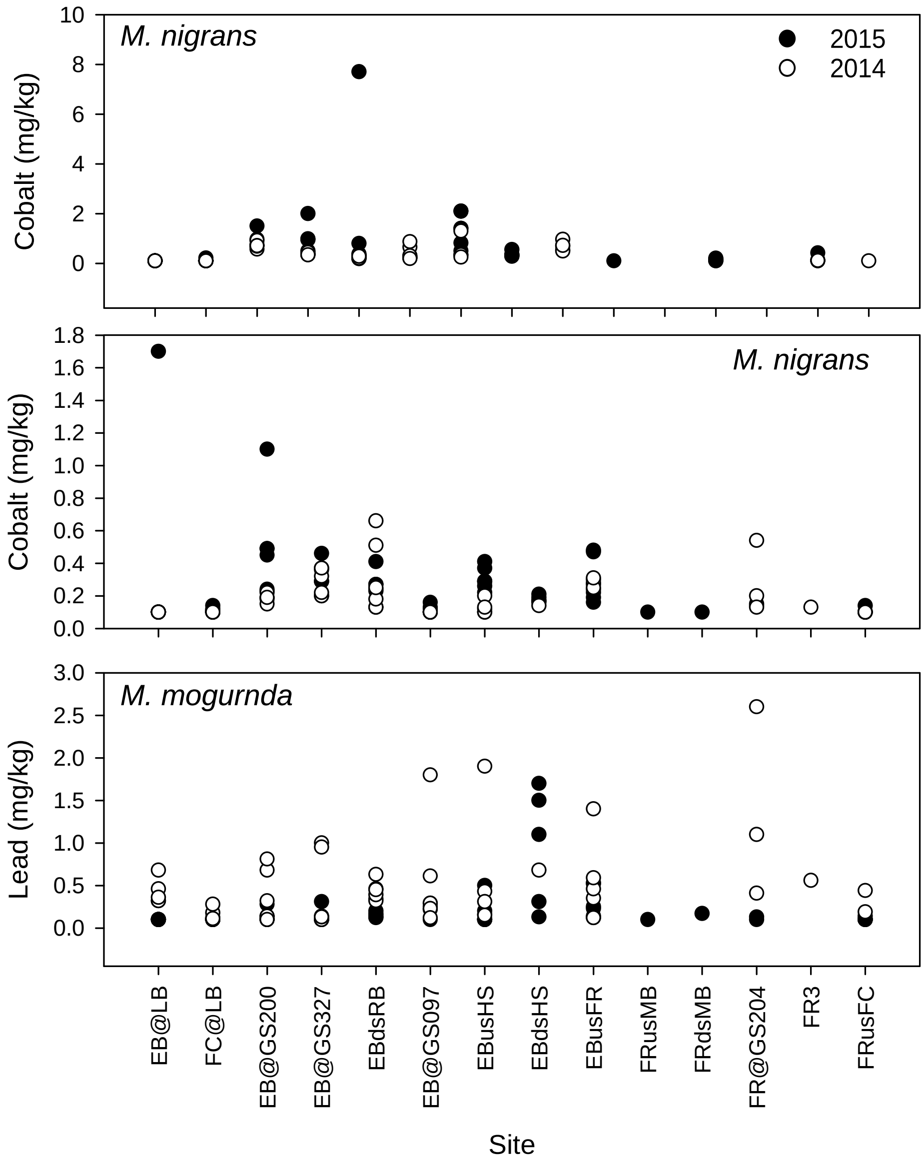

Figure 3-16 Concentrations of selected metals in the tissue of *M. nigrans* (upper panels) and *M. mogurnda* (lower panel)

3.6.2 Summary (Tissue metals)

For cobalt, lead, manganese, nickel and zinc there were differences through sites consistent with a source of increased bioavailability within the East Branch, but concentrations of cobalt, lead and manganese were often higher at sites some way downstream of the mine lease in the upper reaches of zone 3, close to where water discharges from the Brown's Oxide mining operation which is currently in care and maintenance. Compared to the 2014 dataset, concentrations in 2015 were generally lower. Contaminant processes are dominated by climatic regime and flow rates (Jeffree et al. 2001), and it is likely that the heavier rains and higher flow rates experienced in 2014 resulted in a greater level of contaminant transport to the East Branch.

3.7 Radionuclides in Fish, Mussel and Prawn Tissues

In 2015, it was decided to focus the effort devoted to examining radionuclide bioavailability to the East Branch, given the indications of no mine influence on samples from the main Finniss River in 2014. However, the lack of mussels or large bodied fishes in the East Branch, meant that another approach would be needed than the more traditional collection of large tissue samples for radiation emission counts. The lack of large-bodied fishes and mussels was confirmed for the East Branch in the 2015 sampling.

Therefore, it was decided to trial the auto-radiography technique that had been developed by Cresswell *et al*. (2015). This technique has been shown to trace the location of and relative accumulation of tracer radioisotopes for laboratory metal bioaccumulation studies in the freshwater prawn *Macrobrachium australiense*. As the related *Macrobrachium bullatum* is a common constituent of East Branch aquatic assemblages, and mussels in the catchment were known to accumulate substantial quantities of ^{210}Po and ^{228}Ra, it was considered possible that *M. bullatum* would bioaccumulate sufficient radionuclides at East branch sites for the autoradiography technique to work. If it did, while not providing numeric activity-concentration data it would provide pictorial evidence of relative bioaccumulation. Such visual data would also be potentially useful in discussion of radionuclide bioaccumulation by aquatic organisms in the catchment with stakeholders, particularly Traditional Owner groups.

To that end, up to five specimens of *M. bullatum* were collected from each site in the main Finniss River and East Branch. The specimens were euthanised by putting on dry ice, and then immersed in Cryomatrix resin (Thermofisher) and frozen by placing on dry ice. The collected specimens were shipped on dry ice to Dr Tom Cresswell at ANSTO for further analysis. Once received the specimens were stored in a -80°C freezer until analysed. Specimens from the sites most likely to have the highest natural bioavailability of radionuclides (FC@LB, EB@LB, EB@GS200, EB@GS327) were then frozen sectioned at 20 µm in the Cryomatrix using a cryomicrotome (Cryostat Leica CM3050 S, Leica Biosystems) and then thaw mounted onto gelatin-coated glass slides. The slides were immediately dehydrated on a slide warmer at 37°C for 15 min and then covered with a thin mylar film and exposed to a phosphor plate (BASSR 2040) in the dark at room temperature for three weeks, and the resulting exposed plate imaged in a GE Typhoon FLA 7000 reader.

Although this method has been proven to work to image the location and relative amount of bioaccumulated radioisotopes in laboratory tracer studies at realistic total metal concentrations, the plates produced from the East Branch specimens failed to register any visible evidence of radioactivity. Unfortunately, since this technique did not work at the levels of radioactivity in field collected prawns, and in the absence of large bodies fishes or mussels in the East Branch that can be used for more traditional measurements of radionuclide activity concentrations, we have been unable to determine the patterns of exposure to bioavailable radionuclides at sites in the East Branch in zones 2, 3 or 4.

4 DISCUSSION

This second stage of the first investigation in 20 years of the ecological status of the Finniss River and its East Branch had the following broad range of objectives:

i) To give an intensive 'snapshot' indication of the aquatic ecosystem diversity and abundances based predominantly on samples of fishes obtained from gill- netting and other supplementary methods, for comparison with those results from replicated sampling programs undertaken in the 90's, when their recovery in the Finniss River proper was such that no impacts due to the presence of contaminants could be statistically discerned (Jeffree and Twining 2000; Jeffree et al, 2001), compared with unexposed regions;

ii) To initiate the definition of a benchmark of contemporary detriment to freshwater biotas so that any future changes may be discerned as a consequence of further remedial activities at Rum Jungle, as well as their temporal sequence;

iii) To expand the range of biotic measures that could be used system-wide in order to determine environmental quality, including the use of measures of macroinvertebrate and benthic diatom diversity, abundance and assemblage composition;

iv) Use sampling methodologies for fishes and larger macroinvertebrates that could permit modifications to those used historically in order to minimise adverse impacts on target and non-target biota, and reduce sampling effort but still retain scientific validity and comparability with historic datasets;

v) Discern any improvements in environmental quality compared with the 90s; particularly for the East Branch where there was still obvious detriment to fishes and macroinvertebrates at that time;

vi) Expand the geographical scale of the assessment for the first time to include evaluation of effluents from the Mount Burton mine site;

vii) Provide the first data for the development of a subsequent cost-effective monitoring program;

viii) Provide further refinement in the status of the aquatic biota based on contemporary developments in their taxonomic resolution; and

ix) Provide a dataset that could be used to refine the water quality objectives developed for the mine site rehabilitation plan based on comparison of aquatic ecosystem status and measured water and sediment quality.

With regard to fishes the combined results from 2014 and 2015 indicated that in the main Finniss River there was no clear impact on fish diversity and abundances due to their continuing exposures to effluents from Rum Jungle or Mount Burton mine. These results were thus comparable to those obtained from replicated sampling campaigns in the 90s that had shown recovery of sites downstream of the East Branch to levels that showed no significant differences from unexposed sites (Jeffree and Twining 2000; Jeffree et al. , 2001). Such a result would be expected if there was no appreciable increases since the 90s in the contaminant loads being delivered to the main Finniss. This consistency in their recovery may also be attributed in part to the adaptation of the fish biota, based on recent findings for 90s data (Jeffree *et al.,* 2014), although those findings were not overtly supported here.

In the context of the establishment of a contemporary benchmark against which to assess the environmental benefits of further remediation at Rum Jungle for the Finniss River the East Branch is where such improvements will be most clearly observed, as recovery in fish diversity in the main Finniss is not discernibly different from unexposed sites, according to this current assessment.

Given that the biological status of the intermittent East Branch will be a function of both the contaminant loads from Rum Jungle as well as water flows, both factors need to be taken into account when developing a monitoring program with the validity to demonstrate ecological improvements that can be attributed to further mine site remediation.

With respect to the adoption of new sampling methods, Fyke netting in combination with electrofishing are indicated to be adequate to evaluate biodiversity, but with greatly reduced mortalities of target organisms as well as Freshwater Crocodiles.

For the tissue metal results, cobalt, lead, manganese, nickel and zinc showed differences through sites consistent with a source of increased bioavailability within the East Branch, but concentrations of cobalt, lead and manganese were often higher at sites some way downstream of the mine lease in the upper reaches of zone 3, close to where water discharges from the moth-balled Brown's Oxide mining operation. Compared to the 2014 dataset, concentrations in 2015 were generally lower. Contaminant processes are dominated by climatic regime and flow rates (Jeffree et al. 2001), and it is likely that the heavier rains and higher flow rates experienced in 2014 resulted in a greater level of contaminant transport to the East Branch, resulting in higher tissue concentrations.

5 ACKNOWLEDGEMENTS

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APPENDIX 1 2014 & 2015 DIATOMS

	2015																															
	East Branch																				Finniss											
	FC@LB		EB@LB		EB@G-Dys		EB@GS200		EB@GS327		EBdsRB		EB@GS097		EBusHS		EBdsHS		EBusFR		FRusMB		FRdsMB		FR@GS204		FR3		FRusFC		FRdsFC	
Achnanthidium minutissimum	10				22	14	174	226	72	58	68	52	16		117	26		4			48	32	26	68		8			12	38	16	170
Achnanthidium sp.																																
Amphora libyca						2																										
Aulacoseira granulata																													6			
Brachysira brachysira	34	136																														
Brachysira vitrea																																
Cocconeis placentula													2								4											
Craticula cuspidata	8																															
Craticula halophila				6				54																								
Craticula halophiloides							18				4					10																2
Cyclotella atomus																										2						
Cyclotella meneghiniana					4																			2								
Cymbella cistula										2																						
Cymbella delicatula																																
Cymbella helvetica																						2										
Diatoma tenuis																					2											
Diploneis ovalis							2																						2			
Diploneis parma				10					2																2							2
Encyonema gracilis												4																				
Encyonema minuta																																
Encyonema silesiacum			2																		8		8	8								
Encyonopsis cesatii																				4		24					2					
Eolimna minima																																
Epithemia adnata							4																									
Eunotia arcus																							2									
Eunotia bilunaris	2																						10									
Eunotia bilunaris v. mucophila														2															2			
Eunotia fallax		2																						4								
Eunotia formica		8								2																						
Eunotia implicata						2																								2		
Eunotia incisa									2	2											2										2	2
Eunotia minor																						2			2							
Eunotia naeglii																			2													
Eunotia paludosa						4																										
Eunotia serpentina															2									2								
Fallacia tenera				52									72																			36
Fragilaria capucina var capucina																						16							12	8		
Fragilaria capucina var gracilis					2																		4									
Fragilaria capucina var rumpens			8																								2	2	4			
Fragilaria capucina var vaucheriae																																
Fragilaria parasitica																																
Fragilaria tenera			82		12									68	20			4				12						4				
Fragilariforma virescens	4																					2										
Geissleria decussis				2											2																	
Geissleria schoenfeldii																																
Gomphonema acuminatum																															2	
Gomphonema affine		10																														
Gomphonema angustum																																
Gomphonema angustum var "subminutum"																														2		4
Gomphonema clavatum		2	2										2										2									
Gomphonema gracile				4																												
Gomphonema minutum					2																											
Gomphonema parvulum	44					4															14	16							16		14	
Gomphonema pseudoaugar								2																								
Gyrosigma parkerii																													14			
Hantzschia amphioxys																																
Haslea spicula																		2						2								
Karayevia clevei														2		2																2
Karayevia laterostrata		2							4												2					2						
Kolbesia kolbei											4																					
Luticola mutica			4																						2					4		
Navicula bryophila																				2										28		
Navicula capitatoradiata						2				4																						
Navicula cari				2			4																						2			
Navicula cincta								4																								
Navicula cryptocephala																												6				
Navicula cryptotenella			8							2						2						8					58	48	8		18	
Navicula duerrenbergiana																																
Navicula expecta																																
Navicula goeppertiana																										2						
Navicula gottlandica											2																2					
Navicula gregaria	2	4											2							2		2		2								
Navicula jaagii									2														2									
Navicula lanceolata																	2															4
Navicula leptostriata				2																					4						2	4
Navicula libonensis					2																		2									
Navicula mediocris	12											2																				
Navicula menisculoides																									4					2		2
Navicula menisculus			2													14					8	30	92	128		54		4	22	14	10	
Navicula phyllepta					4										2	8			2			4		2	12	42	34	42	8		4	6
Navicula radiosa				12																	32	10	8	12					26	12	8	22
Navicula radiosafallax																		2														
Navicula recens																4															4	
Navicula rhynchocephala																																
Navicula schroeterii							2										2				30		16			4			18	10		
Navicula sp (small)																			4						42	76						
Navicula spp																													2			
Navicula submuralis				4		2													4						6							
Navicula subrhynocephala																															6	
Navicula suchlandtii		2	2							2																						
Navicula veneta					2			2													12				54	12	32	36	8		6	8
Navicula viridula													4																36	36	34	10
Navicula viridula v. germanii																																
Navicula viridula v. rostella	2																															
Neidium affine																												4				
Nitzschia acicularis				8																	6											
Nitzschia agnita												2										12										
Nitzschia amphibia									2																			2	2			
Nitzschia braunii										2																						
Nitzschia capitellata	2																				2	2										
Nitzschia desertorum																		4									2					2
Nitzschia diversa				2								2																				
Nitzschia elegantula				26													2															
Nitzschia filiformis								4		2																						
Nitzschia flexa																2							2									
Nitzschia fonticola			16	24			2		18	22		8			4				12					14	12							
Nitzschia frustulum		4	4																		2		8	8								
Nitzschia frustulum var. bulnhemiana																																
Nitzschia gessneri																																
Nitzschia gracilis			8	12						20	2							54	34		10	8	56	12	42	22				2		
Nitzschia inconspicua												4																			2	
Nitzschia intermedia						4																										
Nitzschia lacuum			4											12																		
Nitzschia linearis			4							4							44	30	58													
Nitzschia lorenziana																			2													
Nitzschia microcephala			2																													
Nitzschia nana								2																								
Nitzschia palea	8		16		12	14	12		38	8	22	28	42	30	94	44	38	52	146	74		18			36	18	8	8	4			
Nitzschia paleaceae	52	12					4			4			28	26	12	42		12					30	32			8		10	20		
Nitzschia pumilla																		2				2										
Nitzschia pura			4													4							4							2		
Nitzschia reversa											4						2							4								
Nitzschia sigma					64	26	6	4							12			8	8	4										2		
Nitzschia sociabilis	4	2		4																4									2			
Nitzschia sp																														18		
Nitzschia suchlandii			6		2																											
Nitzschia supralitorea			8																													
Nitzschia umbonata																																
Nitzschia valdecostata																																
Nitzschia valdestriata																																
Nitzschia vermicularis								2																			2					
Opephora olsenii																																
Pinnularia aff. Subrostrata						58	4	4			4	18	12	6	18													4				
Pinnularia borealis								4													2	4										
Pinnularia braunii						2																	2									2
Pinnularia gibba																												2				
Pinnularia intermedia	2			2	4																			2				4				2
Pinnularia interrupta												2	2																			
Pinnularia legumen										2																		6				
Pinnularia microstauron								2	4																							
Pinnularia obtusa					2																											
Pinnularia similis			2		6																											
Pinnularia viridula															2																	
Placoneis clementis																																
Placoneis elginensis																			2													
Planothidium frequentissimum											2																					
Planothidium lanceolatum																2				2	44									4		
Psammothidium saccula						2								2																		
Pseudostaurosira brevistriata							2											2		2												
Rhoicosphenia abbreviata									2																					2		
Rhopalodia brebissonii				2																												
Rhopalodia constricta			2																													
Rhopalodia musculus								2	150	202	154	172	172	180	96	178	224	154	88	26												
Sellaphora pupula	26	4	64	58	2																				16			14	8		26	8
Sellaphora seminulum									10																							
Stauroneis anceps																																
Stauroneis nobilis																																
Staurosira construens forma venter																																
Stenopterobia curvula			12												2	2				2	8	8	12		22					4		
Surirella angusta																															2	
Surirella brebissonii																																
Surirella elegans														2										2								
Surirella minuta																					2											
Surirella ovalis																						2										
Surirella subsalsa																									8	4	12					
Synedra ulna	8			8														10	46	68					4				22			

	2014																															
	East Branch																				Finniss											
	FC@LB		EB@LB		EB@G_Dys		EB@GS200		EB@GS327		EBdsRB				EBusHS		EBdsHS		EBusFR		FRusMB		FRdsMB		FR@GS204		FR3		FRusFC		FRdsFC	
Achnanthidium minutissimum	52	46	24	22	102	94	318	326	76	112	186	205			62		84	32			12	12	24	34					6	22	172	108
Achnanthidium sp.								12		4						18	15															
Amphora libyca				4																												
Aulacoseira granulata																																
Brachysira brachysira	16	22																													4	
Brachysira vitrea																		2														
Cocconeis placentula																																
Craticula cuspidata																																
Craticula halophila																																
Craticula halophiloides																																
Cyclotella atomus									2																							
Cyclotella meneghiniana																												4				
Cymbella cistula																2																
Cymbella delicatula						2																		2								
Cymbella helvetica																						2				2						
Diatoma tenuis											2																					
Diploneis ovalis					2																				2							
Diploneis parma			4																													
Encyonema gracilis										2																						
Encyonema minuta		8	2																			2										
Encyonema silesiacum		64	18	22																		12	2	12								
Encyonopsis cesatii	4																															
Eolimna minima																										2					2	
Epithemia adnata																																
Eunotia arcus																		2														
Eunotia bilunaris				16																												
Eunotia bilunaris v. mucophila			28	30							2																	2				
Eunotia fallax															2																	
Eunotia formica																																
Eunotia implicata				2																												
Eunotia incisa		8																														
Eunotia minor																2																
Eunotia naeglii																														4		
Eunotia paludosa																				2		2										
Eunotia serpentina			2																													
Fallacia tenera				4																	8						8					
Fragilaria capucina var capucina		12																											4	16	28	42
Fragilaria capucina var gracilis			8																													
Fragilaria capucina var rumpens				4																									2	4	4	
Fragilaria capucina var vaucheriae																											2					
Fragilaria parasitica																						2										
Fragilaria tenera						2																										
Fragilariforma virescens																							2									
Geissleria decussis				2					2																							
Geissleria schoenfeldii																		2														
Gomphonema acuminatum																												2				
Gomphonema affine										2																						
Gomphonema angustum	18		24	24																											4	
Gomphonema angustum var "subminutum"											2																					
Gomphonema clavatum						2																			2							
Gomphonema gracile			4																												4	
Gomphonema minutum			2							2																		2				
Gomphonema parvulum		16	44	8																	12		4		2			8	4	8		8
Gomphonema pseudoaugar																2											2					
Gyrosigma parkerii																																
Hantzschia amphioxys																								2								
Haslea spicula																					2		2									
Karayevia clevei			2												2																	
Karayevia laterostrata					2																											
Kolbesia kolbei				2																		2									2	
Luticola mutica									2											2												
Navicula bryophila												12			72	8			12													
Navicula capitatoradiata											2																					
Navicula cari									2												2		2									
Navicula cincta																												2				
Navicula cryptocephala																		2	2				4									12
Navicula cryptotenella	8		40	84																		18	22									12
Navicula duerrenbergiana																												2				
Navicula expecta				2																												
Navicula goeppertiana																					4		4									
Navicula gottlandica															2																	
Navicula gregaria				2																												4
Navicula jaagii															8															8	4	
Navicula lanceolata									4		2	2						2				12	16						18	54		16
Navicula leptostriata				2																												26
Navicula libonensis																										2		2				
Navicula mediocris	4	24																										2				
Navicula menisculoides												10									12					58			6			6
Navicula menisculus	4		8	10		2													4		42	84	42	52	48	8	72	54	36	8	8	
Navicula phyllepta																2																
Navicula radiosa																												4	4	16		22
Navicula radiosafallax																								2					2			4
Navicula recens	2			2																												
Navicula rhynchocephala																							4							2		
Navicula schroeterii																					20	26	18	20	28	54	8		10			
Navicula sp (small)																																
Navicula spp			2								18						12	36	6													
Navicula submuralis												8							2				8									6
Navicula subrhynocephala																													4			18
Navicula suchlandtii															8																	
Navicula veneta	12	20							4									2			118	18	20	42	80		48	16		96	26	
Navicula viridula															2							8										
Navicula viridula v. germanii			2																													
Navicula viridula v. rostella												2																				
Neidium affine																											2					
Nitzschia acicularis																																
Nitzschia agnita																											4					
Nitzschia amphibia									2																							
Nitzschia braunii																															2	
Nitzschia capitellata	2																									2						
Nitzschia desertorum											2																	2				
Nitzschia diversa																										2						
Nitzschia elegantula																																
Nitzschia filiformis					12	152			12	16					12	32	56			8		2		24		2						
Nitzschia flexa																		4								8						
Nitzschia fonticola				2		2			12											12					22							
Nitzschia frustulum		4		2					2											8			12	16		8		4				
Nitzschia frustulum var. bulnhemiana																											2					
Nitzschia gessneri												2													2							
Nitzschia gracilis		2		4					12								12	8		10						2	42	4				
Nitzschia inconspicua				4														2	2	8									2			
Nitzschia intermedia					2																											
Nitzschia lacuum				2					2																		4					
Nitzschia linearis															4	52	12	16		24				16	92	14	12		2			
Nitzschia lorenziana											2																2					
Nitzschia microcephala		2																		8												
Nitzschia nana										2								8														
Nitzschia palea	2	4	40	26		8	12	4	48	12	28	14				142	156	86	172	204	4				14		12		4	4		
Nitzschia paleaceae	4	8	30	10			8		30		30	20			4	48	24	44	46	42	30	36					28	18	6	6		
Nitzschia pumilla																	8	44	48	36	4	16		22		72	22	28				
Nitzschia pura			2																													
Nitzschia reversa																									2							
Nitzschia sigma																																
Nitzschia sociabilis																														2		
Nitzschia sp																																
Nitzschia suchlandii		2															2	12		2												
Nitzschia supralitorea						2															4											
Nitzschia umbonata																						2										
Nitzschia valdecostata									2																		2					
Nitzschia valdestriata																							2					2				
Nitzschia vermicularis																										2						
Opephora olsenii			2														2															
Pinnularia aff. Subrostrata																																
Pinnularia borealis							2		4						2				4													
Pinnularia braunii						2			6																							
Pinnularia gibba							4									6																
Pinnularia intermedia																				2												
Pinnularia interrupta						4			4										4													
Pinnularia legumen																4																
Pinnularia microstauron				2														2													2	
Pinnularia obtusa																2																
Pinnularia similis																														2		
Pinnularia viridula																																2
Placoneis clementis																							2									
Placoneis elginensis																								2								
Planothidium frequentissimum		2																														
Planothidium lanceolatum																																8
Psammothidium saccula																										2						
Pseudostaurosira brevistriata		2																2														
Rhoicosphenia abbreviata						2														2												
Rhopalodia brebissonii																									2							
Rhopalodia constricta																															2	
Rhopalodia musculus									134	118	84	16			110	58	6	12	32	32								6				
Sellaphora pupula	12	16	16																		8	8			4							
Sellaphora seminulum				38								8									12											2
Stauroneis anceps				2																												
Stauroneis nobilis	12																															
Staurosira construens forma venter																	2															
Stenopterobia curvula																							12		8							8
Surirella angusta		2																								10						
Surirella brebissonii						6														4						6						
Surirella elegans																										4	2					
Surirella minuta						4														2												
Surirella ovalis																										4						
Surirella subsalsa																																
Synedra ulna	30		18	8											8					16												

APPENDIX 2 2014 & 2015 MACROINVERTEBRATES

2014

			FC @ LB	FC @ LB	FC @ LB	EB @ LB	EB @ LB	EB @ LB	EB @ GS200	EB @ GS200	EB @ GS200	EB @ GS327	EB @ GS327	EB @ GS327	EB d/s RB	EB d/s RB	EB d/s RB	EB @ GS097	EB @ GS097	EB @ GS097	EB u/s HS (EB3)	EB u/s HS (EB3)	EB u/s HS (EB3)	EB d/s HS (EB2)	EB d/s HS (EB2)	EB d/s HS (EB2)	EB u/s FR (EB1)	EB u/s FR (EB1)	EB u/s FR (EB1)	FR u/s MB	FR u/s MB	FR u/s MB	FR d/s MB	FR d/s MB	FR d/s MB	FR @ GS204	FR @ GS204	FR @ GS204	FR3	FR3	FR3	FR2	FR2	FR2	FR1	FR1	FR1	FR0	FR0	FR0
Phylum	Class/Order	Family	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	3	2	1	2	3	1	2	3	1	2	3	1	2	3	1	3	1	2	1	3
ARTHROPODA	ARACHNIDA	ACARINA		1	5						1																						4		1			1	1			1				1	1	2		
MOLLUSCA	GASTROPODA	Ancylidae														1																															1		5
ARTHROPODA	ODONATA	Anisoptera/Epiproctophora																						1									1					1		1	2									1
ARTHROPODA	DECAPODA	Atyidae																																																
ARTHROPODA	EPHEMEROPTERA	Baetidae	11	11	8		1																												1	3			1		1			1		1				
ARTHROPODA	EPHEMEROPTERA	Caenidae	85	38	28	1	33	16						1	55	46	65							1	3	1			1				62	20	8	47	208	88	89	41	72	39		5	1	86	68	105	95	84
ARTHROPODA	TRICHOPTERA	Calamoceratidae																																			3													
ARTHROPODA	DIPTERA	Ceratopogonidae	12	8	10	2	6	3					3	1	3	5	5	5	1	1	1	3			1	4	2	1	3	1	3		3		7	43	82	30	35	16	18	16	4		5	4	2	5	6	7
ARTHROPODA	DIPTERA	Chironomidae	6	2	6	2	4	3							8	10	10	1							2		1	1				1	11	4		4	15	2	15	7	4	3				6	3	5	1	9
ARTHROPODA	DIPTERA	Chironomiinae	129	94	63	55	88	22	1	4		3	2	2	47	47	53	5	13	1	5	2	5	39	48	13	43	25	26	17	13	11	103	21	24	17	118	32	86	37	61	88	12	68	13	86	72	79	95	96
ARTHROPODA	CLADOCERA	CLADOCERA	1		1																																													
ARTHROPODA	Zygoptera	Coenagrionidae																																																
ARTHROPODA	COPEPODA	COPEPODA			1	1																		2	4																								1	
ARTHROPODA	HEMIPTERA	Corixidae			1			1															1																		1								1	1
ARTHROPODA	LEPIDOPTERA	Crambidae																																												5	1		
ARTHROPODA	DIPTERA	Culicidae	1																																															
ARTHROPODA	COLEOPTERA	Dytiscidae	1								1																																							
ARTHROPODA	TRICHOPTERA	Ecnomidae										2		8	1		2	1	1			1	1										5		2		2		2	1	1	2		1		3	4	3	1	5
ARTHROPODA	COLEOPTERA	Elmidae (A)														9	19																8	1	2	82	68	85	3	3	33	9				6	11	9		3
ARTHROPODA	COLEOPTERA	Elmidae (L)		1												26	12																35	5	11	14	56	21	36	30	20	37	16	11		17	39	19	38	14
ARTHROPODA	HEMIPTERA	Gerridae																			1																													
ARTHROPODA	ODONATA	Gomphidae	1	1											1		2	1		1													1				5	2		1			1	1			2			
ARTHROPODA	COLEOPTERA	Hydraenidae	1	1																																														
CNIDARIA	HYDROZOA	Hydridae																																															5	
ARTHROPODA	COLEOPTERA	Hydrophilidae (A)																	1														1																	1
ARTHROPODA	COLEOPTERA	Hydrophilidae (L)	1																																															
ARTHROPODA	TRICHOPTERA	Hydroptilidae (L)														2		1																					2		1					1	2	2		
ARTHROPODA	TRICHOPTERA	Hydroptilidae (P)																																		1														
MOLLUSCA	BIVALVIA	Hyriidae																																															1	
ARTHROPODA	TRICHOPTERA	Leptoceridae	1		1	1	3								5	4	7	1				1		2		1							15	4	5	2	13	9	4	2	2		1	3		47	23	2	4	4
ARTHROPODA	EPHEMEROPTERA	Leptophlebiidae																																																
ARTHROPODA	ODONATA	Libellulidae																																									1							
NEMATODA	NEMATODA	NEMATODA	1	4	2											2	2		4				1					1	3				5		2		2	3		2	3	4	1			6	14	7	1	
ARTHROPODA	HEMIPTERA	Notonectidae																1																																
ANNELIDA	OLIGOCHAETA	OLIGOCHAETA	14	32	39	21	18	9						1		6	4							1			5	1	1	1			2			1	17	1	12	31	9	28	2	5	1	21	21	6	25	22
ARTHROPODA	ARACHNIDA	ORIBATIDA																									1													1										
ARTHROPODA	DIPTERA	Orthocladinae		1	1		2								11	23	42								1	1			1				55	8	3	39	146	36	142	45	82	22	2	1		6	4	7	5	
ARTHROPODA	OSTRACODA	OSTRACODA																																						2										
ARTHROPODA	DECAPODA	Palaemonidae																																										2	1					
ARTHROPODA	HEMIPTERA	Pleidae																			1																						1							
ARTHROPODA	DIPTERA	Simuliidae																																													1		
ARTHROPODA	COLLEMBOLLA	Symphypleona										1															5																							
ARTHROPODA	DIPTERA	Tabanidae																																			2	1									1			
ARTHROPODA	DIPTERA	Tanypodinae	15	17	13	9	7	13			1	4	2	1	14	7	30	2	2	1	5	5	4	5	1	4	3	8	3	1	4	1	15	3	1	5	28	20	25	13	22	5		2	3	9	4	14	45	27
ARTHROPODA	DIPTERA	Tipulidae			1										2	6	4	2				3	3	1		1		8	12	1	7	3	2	1	1	5	9	7	5		1									
PLATYHELMINTHES	TURBELLARIA	TURBELLARIA																																			1													
MOLLUSCA	GASTROPODA	Viviparidae															2																																	

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			FC@LB	FC@LB	FC@LB	EB@LB	EB@LB	EB@LB	EB@GS200	EB@GS200	EB@GS200	EB@GS327	EB@GS327	EB@GS327	EBdsRB	EBdsRB	EBdsRB	EB@GS097	EB@GS097	EB@GS097	EBusHS	EBusHS	EBusHS	EBdsHS	EBdsHS	EBdsHS	EBusFR	EBusFR	EBusFR	FRusMB	FRusMB	FRusMB	FRdsMB	FRdsMB	FRdsMB	FR@GS204	FR@GS204	FR@GS204	FR3	FR3	FR3	FR2	FR2	FR2	FR1	FR1	FR1
Phylum	Class/Order	Family	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
ARTHROPODA	ARACHNIDA	ACARINA		2																											1	7															1
MOLLUSCA	GASTROPODA	Ancylidae	1				4		1																						2																
ARTHROPODA	ODONATA	Anisoptera/Epiproctophora																																													1
ARTHROPODA	DECAPODA	Atyidae																																										1			
ARTHROPODA	EPHEMEROPTERA	Baetidae	6	6	6		7												2												2								3	9	2						
ARTHROPODA	EPHEMEROPTERA	Caenidae	157	184	104	92	60	62	5									4	27	4				2	4	2		8	15	29	86	34	12	24	7		6	28	95	69	41	6	20	29	51	17	121
ARTHROPODA	TRICHOPTERA	Calamoceratidae																														1															
ARTHROPODA	DIPTERA	Ceratopogonidae	1	5	8	8	8	13	2	3	4			1	1			1	1	1		3					1	8	1	9	2	2	7	16	8	21		7	7	8	12		2	3		4	2
ARTHROPODA	DIPTERA	Chironomidae	1	1			1	2											1	3		1		1	1					4	2	2				2	2	1	4	1						1	1
ARTHROPODA	DIPTERA	Chironomiinae	5	19	19	28	30	16		1	1	7	2	3	6	12	1	5	29	49	10	27	24	8	23	22	18	28	38	42	26	16	24	23	22	52	17	5	12	17	18			1	18	51	8
ARTHROPODA	CLADOCERA	CLADOCERA		2																																											
ARTHROPODA	Zygoptera	Coenagrionidae						1																																							
ARTHROPODA	COPEPODA	COPEPODA	9	8	2	4	4					4		2	7	16		47	8	1	7	17	15	5	14	11			2	1	4	1				12	10	5	16	7	3				2	7	
ARTHROPODA	HEMIPTERA	Corixidae					2	2					1		1	1	5	1												1	3							1	1	3							
ARTHROPODA	LEPIDOPTERA	Crambidae																																													1
ARTHROPODA	DIPTERA	Culicidae						2																																						1	
ARTHROPODA	COLEOPTERA	Dytiscidae						1			1																																				
ARTHROPODA	TRICHOPTERA	Ecnomidae	3	1	1	4		2	1			4	9	9		1			2	1			1		2		1			3	3	1	3	6	3	1	1	1	7	2	2			3	1	5	8
ARTHROPODA	COLEOPTERA	Elmidae (A)			1																																	3						3			1
ARTHROPODA	COLEOPTERA	Elmidae (L)																	3											1	1	7				6		31	16	2	18	10	2	3			
ARTHROPODA	HEMIPTERA	Gerridae																				1																									
ARTHROPODA	ODONATA	Gomphidae	1	4	1										1	1	1								1				2		4						2	1	2	1					1	1	2
ARTHROPODA	COLEOPTERA	Hydraenidae																																													
CNIDARIA	HYDROZOA	Hydridae					9												2																												
ARTHROPODA	COLEOPTERA	Hydrophilidae (A)																																													
ARTHROPODA	COLEOPTERA	Hydrophilidae (L)																																													
ARTHROPODA	TRICHOPTERA	Hydroptilidae (L)				1		2																							2			2											1		
ARTHROPODA	TRICHOPTERA	Hydroptilidae (P)																																													
MOLLUSCA	BIVALVIA	Hyriidae						1																																1							
ARTHROPODA	TRICHOPTERA	Leptoceridae					1				1							4		2		2	1				1		1		5	1		2	2	2	5	2	18	1	4	6	4	9	8	4	5
ARTHROPODA	EPHEMEROPTERA	Leptophlebiidae																														1												4			
ARTHROPODA	ODONATA	Libellulidae																														4															
NEMATODA	NEMATODA	NEMATODA	2			4	11								2	2		1		2		6					1			3	1	1	1	13				1			2				1		
ARTHROPODA	HEMIPTERA	Notonectidae			1																											1								1							
ANNELIDA	OLIGOCHAETA	OLIGOCHAETA	29	6	3	2	25	5			2	1			1	6		1	12			2	1				2			13	16	3		3		8		1	6	2	1	12	8	2	6	3	1
ARTHROPODA	ARACHNIDA	ORIBATIDA																				2																1									
ARTHROPODA	DIPTERA	Orthocladinae						2		1											2	8						4		33	9	2	1			16			6	17	11						3
ARTHROPODA	OSTRACODA	OSTRACODA		2	2		2																									1	2	20	1				3		6						
ARTHROPODA	DECAPODA	Palaemonidae	1																														2											3			
ARTHROPODA	HEMIPTERA	Pleidae																																													
ARTHROPODA	DIPTERA	Simuliidae																																													
ARTHROPODA	COLLEMBOLLA	Symphypleona																																													
ARTHROPODA	DIPTERA	Tabanidae																																													
ARTHROPODA	DIPTERA	Tanypodinae	17	56	35	75	61	41	7	4	5	6	2	3	9	10	8	8	16	10	9	17	10	11	6	2	8	56	29	6	11	13	9	16	2	23	6	8	24	15	11			2	8	31	2
ARTHROPODA	DIPTERA	Tipulidae											5									1						4	4							1		1							1		
PLATYHELMINTHES	TURBELLARIA	TURBELLARIA																																													
MOLLUSCA	GASTROPODA	Viviparidae																																													

APPENDIX 3 2014 TISSUE METALS

Species	Tissue Type	Length (mm)	Weight (g)	Dissected Length (mm)	Dissected Weight (g)	Sample No.	Replicate	Date sampled	Aluminium (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Thorium (mg/kg)	Uranium (mg/kg)	Zinc (mg/kg)
Nematalosa erebi	Flesh	231.0	219.6			1	0	2/06/2014	<1.5	0.11	<0.02	<0.1	0.14	<0.1	4	<0.1	<0.1	<0.1	2.8
Nematalosa erebi	Flesh	231.0	219.6			1	1	2/06/2014	<1.5	0.14	<0.02	<0.1	0.14	<0.1	4	<0.1	<0.1	<0.1	2.8
Nematalosa erebi	Flesh	242.0	243.1			2	0	2/06/2014	<1.5	0.1	<0.02	<0.1	0.14	<0.1	4.4	<0.1	<0.1	<0.1	2.8
Nematalosa erebi	Flesh	255.0	292.2			3	0	2/06/2014	<1.5	<0.1	<0.02	<0.1	0.17	<0.1	1.4	<0.1	<0.1	<0.1	2.9
Nematalosa erebi	Flesh	235.0	209.2			4	0	2/06/2014	<1.5	<0.1	<0.02	<0.1	0.19	<0.1	3	<0.1	<0.1	<0.1	2.9
Nematalosa erebi	Flesh	252.0	268.6			5	0	2/06/2014	<1.5	0.11	<0.02	<0.1	0.19	<0.1	17	<0.1	<0.1	<0.1	4.8
Nematalosa erebi	Flesh	270.0	359.0			6	0	1/06/2014	<1.5	0.14	<0.02	<0.1	0.17	<0.1	3.6	<0.1	<0.1	<0.1	3.6
Nematalosa erebi	Flesh	254.0	290.0			7	0	1/06/2014	<1.5	<0.1	<0.02	<0.1	0.19	<0.1	1.9	<0.1	<0.1	<0.1	2.6
Nematalosa erebi	Flesh	260.0	334.0			8	0	1/06/2014	<1.5	<0.1	<0.02	<0.1	0.19	<0.1	2.8	<0.1	<0.1	<0.1	3.5
Nematalosa erebi	Flesh	283.0	354.0			9	0	1/06/2014	<1.5	0.12	<0.02	<0.1	0.24	<0.1	2.6	<0.1	<0.1	<0.1	2.8
Nematalosa erebi	Flesh	262.0	284.0			10	0	1/06/2014	<1.5	0.1	<0.02	<0.1	0.13	<0.1	5	<0.1	<0.1	<0.1	3.2
Nematalosa erebi	Flesh	252.0	241.0			11	0	3/06/2014	<1.5	0.1	<0.02	<0.1	0.17	<0.1	8.1	<0.1	<0.1	<0.1	3.4
Nematalosa erebi	Flesh	252.0	241.0			11	1	3/06/2014	<1.5	<0.1	<0.02	<0.1	0.17	<0.1	8.3	<0.1	<0.1	<0.1	3.5
Nematalosa erebi	Flesh	255.0	330.0			12	0	3/06/2014	<1.5	0.12	<0.02	<0.1	0.21	<0.1	5	<0.1	<0.1	<0.1	3.3
Nematalosa erebi	Flesh	252.0	312.0			13	0	3/06/2014	<1.5	<0.1	<0.02	<0.1	0.21	<0.1	6.9	<0.1	<0.1	<0.1	3.3
Nematalosa erebi	Flesh	243.0	288.0			14	0	3/06/2014	<1.5	0.1	<0.02	<0.1	0.15	<0.1	2.1	<0.1	<0.1	<0.1	3.5
Nematalosa erebi	Flesh	265.0	318.0			15	0	3/06/2014	<1.5	<0.1	<0.02	<0.1	0.13	<0.1	4.9	<0.1	<0.1	<0.1	3.1
Nematalosa erebi	Flesh	289.0	482.0			16	0	1/06/2014	<1.5	0.15	<0.02	<0.1	0.19	<0.1	1.8	<0.1	<0.1	<0.1	3.5
Nematalosa erebi	Flesh	275.0	376.0			17	0	1/06/2014	<1.5	0.11	<0.02	<0.1	0.14	<0.1	3.6	<0.1	<0.1	<0.1	3.4
Nematalosa erebi	Flesh	206.0	170.0			18	0	1/06/2014	<1.5	0.12	<0.02	<0.1	0.18	<0.1	1.3	<0.1	<0.1	<0.1	3
Nematalosa erebi	Flesh	281.0	372.0			19	0	1/06/2014	<1.5	0.15	<0.02	<0.1	0.16	<0.1	3.5	<0.1	<0.1	<0.1	4.2
Nematalosa erebi	Flesh	253.0	276.0			20	0	1/06/2014	<1.5	0.11	<0.02	<0.1	0.2	<0.1	2.6	<0.1	<0.1	<0.1	3.2
Nematalosa erebi	Flesh	330.0	268.0			21	0	20/05/2014	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	1.5	<0.1	<0.1	<0.1	2.9
Nematalosa erebi	Flesh	330.0	268.0			21	1	20/05/2014	<1.5	<0.1	<0.02	<0.1	0.16	<0.1	1.6	<0.1	<0.1	<0.1	3
Nematalosa erebi	Flesh	294.0	270.0			22	0	20/05/2014	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	3.2	<0.1	<0.1	<0.1	3.5
Nematalosa erebi	Flesh	172.0	221.0			23	0	20/05/2014	<1.5	0.13	<0.02	<0.1	0.21	<0.1	2.5	<0.1	<0.1	<0.1	2.8
Nematalosa erebi	Flesh	274.0	256.0			24	0	20/05/2014	<1.5	0.14	<0.02	<0.1	0.23	<0.1	0.75	<0.1	<0.1	<0.1	2.5
Nematalosa erebi	Flesh	300.0	266.0			25	0	20/05/2014	<1.5	0.1	<0.02	<0.1	0.25	<0.1	2	<0.1	<0.1	<0.1	3.2
Nematalosa erebi	Flesh	210.0	162.0			26	0	22/05/2014	<1.5	0.14	<0.02	<0.1	0.17	<0.1	0.55	<0.1	<0.1	<0.1	2.7
Nematalosa erebi	Flesh	191.0	136.0			27	0	22/05/2014	1.5	0.16	<0.02	<0.1	0.26	<0.1	1	<0.1	<0.1	<0.1	3.1
Nematalosa erebi	Flesh	179.0	98.0			28	0	22/05/2014	<1.5	0.13	<0.02	<0.1	0.19	<0.1	0.68	<0.1	<0.1	<0.1	2.9
Nematalosa erebi	Flesh	146.0	58.0			29	0	22/05/2014	<1.5	0.14	<0.02	<0.1	0.19	<0.1	2.3	<0.1	<0.1	<0.1	3.5
Nematalosa erebi	Flesh	611.0	128.0			30	0	22/05/2014	<1.5	0.17	<0.02	<0.1	0.18	<0.1	0.59	<0.1	<0.1	<0.1	2.7
Neosilurus hyrtlii	Flesh	456.0	359.0			31	0	20/05/2014	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.18	<0.1	<0.1	<0.1	3.4
Neosilurus hyrtlii	Flesh	456.0	359.0			31	1	20/05/2014	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.19	<0.1	<0.1	<0.1	3.5
Neosilurus hyrtlii	Flesh					32	0	20/05/2014	<1.5	<0.1	<0.02	<0.1	0.086	<0.1	0.1	<0.1	<0.1	<0.1	3.6
Neosilurus hyrtlii	Flesh	304.0	320.0			33	0	20/05/2014	<1.5	0.13	<0.02	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	3.3
Neosilurus hyrtlii	Flesh	310.0	327.0			34	0	20/05/2014	<1.5	0.14	<0.02	<0.1	0.11	<0.1	0.12	<0.1	<0.1	<0.1	3.1
Neosilurus hyrtlii	Flesh	170.0	280.0			35	0	20/05/2014	<1.5	0.12	<0.02	<0.1	0.13	<0.1	0.14	<0.1	<0.1	<0.1	2.8
Neosilurus hyrtlii	Flesh	360.0	418.0			36	0	22/05/2014	<1.5	0.14	<0.02	<0.1	0.13	<0.1	0.12	<0.1	<0.1	<0.1	5.9
Neosilurus hyrtlii	Flesh	320.0	312.0			37	0	22/05/2014	<1.5	0.14	<0.02	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	4.2
Neosilurus hyrtlii	Flesh	332.0	376.0			38	0	22/05/2014	<1.5	0.13	<0.02	<0.1	0.084	<0.1	<0.1	<0.1	<0.1	<0.1	4.2
Neosilurus hyrtlii	Flesh	334.0	406.0			39	0	22/05/2014	<1.5	0.11	<0.02	<0.1	0.09	<0.1	<0.1	<0.1	<0.1	<0.1	3.5
Neosilurus hyrtlii	Flesh	301.0	298.0			40	0	22/05/2014	<1.5	0.12	<0.02	<0.1	0.093	<0.1	<0.1	<0.1	<0.1	<0.1	4
Neosilurus hyrtlii	Flesh	183.0	43.8			41	0	3/06/2014	<1.5	0.13	<0.02	<0.1	0.1	<0.1	0.11	<0.1	<0.1	<0.1	6
Neosilurus hyrtlii	Flesh	183.0	43.8			41	1	3/06/2014	<1.5	0.12	<0.02	<0.1	0.11	<0.1	0.11	<0.1	<0.1	<0.1	6.2
Neosilurus hyrtlii	Flesh	255.0	125.3			42	0	2/06/2014	<1.5	0.13	<0.02	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	11
Neosilurus hyrtlii	Flesh	272.0	151.3			43	0	2/06/2014	<1.5	0.11	<0.02	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	8.7
Neosilurus hyrtlii	Flesh	243.0	117.3			44	0	2/06/2014	<1.5	0.12	<0.02	<0.1	0.11	<0.1	0.11	<0.1	<0.1	<0.1	9.3
Neosilurus hyrtlii	Flesh	244.0	118.1			45	0	2/06/2014	<1.5	0.1	<0.02	<0.1	0.098	<0.1	<0.1	<0.1	<0.1	<0.1	7.5
Neosilurus hyrtlii	Flesh	251.0	119.7			46	0	2/06/2014	<1.5	0.13	<0.02	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	9.3
Neosilurus hyrtlii	Flesh	150.0	23.7			47	0	29/05/2014	<1.5	0.12	<0.02	<0.1	0.12	<0.1	0.13	<0.1	<0.1	<0.1	6.9
Neosilurus hyrtlii	Flesh	116.0	11.7			48	0	29/05/2014	<1.5	<0.1	<0.05	0.16	0.17	<0.1	0.21	<0.1	<0.2	<0.2	6.5
Neosilurus hyrtlii	Flesh	117.0	11.8			49	0	29/05/2014	<1.5	<0.1	<0.05	0.16	0.18	<0.1	0.31	<0.1	<0.2	<0.2	6.8
Neosilurus hyrtlii	Flesh	110.0	10.0			50	0	29/05/2014	<1.5	<0.1	<0.05	0.31	0.16	<0.1	0.36	0.19	<0.2	<0.2	5.8
Neosilurus hyrtlii	Flesh	111.0	9.2			51	0	29/05/2014	<1.5	<0.1	<0.05	0.23	0.18	<0.1	0.26	<0.1	<0.2	<0.2	10
Neosilurus hyrtlii	Flesh	111.0	9.2			51	1	29/05/2014	<1.5	<0.1	<0.02	0.25	0.19	<0.1	0.27	<0.1	<0.2	<0.2	10
Neosilurus hyrtlii	Flesh	145.0	21.9			52	0	29/05/2014	<1.5	0.13	<0.02	0.17	0.15	<0.1	0.2	0.17	<0.1	<0.1	11
Neosilurus hyrtlii	Flesh	150.0	27.4			53	0	29/05/2014	<1.5	<0.1	<0.02	0.24	0.16	<0.1	0.27	0.1	<0.1	<0.1	8.7
Neosilurus hyrtlii	Flesh	136.0	15.7			54	0	29/05/2014	<1.5	0.15	<0.02	0.24	0.17	<0.1	0.24	0.14	<0.1	<0.1	9.7
Neosilurus hyrtlii	Flesh	149.0	24.7			55	0	29/05/2014	<1.5	0.14	<0.02	0.39	0.14	<0.1	0.28	0.14	<0.1	<0.1	11
Neosilurus hyrtlii	Flesh	148.0	25.5			56	0	29/05/2014	<1.5	<0.1	<0.02	0.28	0.12	<0.1	0.25	0.2	<0.1	<0.1	10
Neosilurus hyrtlii	Flesh	222.0	82.1			57	0	31/05/2014	<1.5	0.16	<0.02	<0.1	0.081	<0.1	<0.1	<0.1	<0.1	<0.1	7
Neosilurus hyrtlii	Flesh	239.0	106.4			58	0	31/05/2014	<1.5	0.12	<0.02	<0.1	0.11	<0.1	<0.1	<0.1	<0.1	<0.1	7.9
Neosilurus hyrtlii	Flesh	263.0	123.6			59	0	31/05/2014	<1.5	0.12	<0.02	<0.1	0.13	<0.1	<0.1	<0.1	<0.1	<0.1	9.6
Neosilurus hyrtlii	Flesh	189.0	45.9			60	0	31/05/2014	<1.5	0.11	<0.02	<0.1	0.1	<0.1	0.21	<0.1	<0.1	<0.1	5
Neosilurus hyrtlii	Flesh	212.0	79.0			61	0	31/05/2014	<1.5	0.15	<0.02	<0.1	0.13	<0.1	0.1	<0.1	<0.1	<0.1	5.8
Neosilurus hyrtlii	Flesh	212.0	79.0			61	1	31/05/2014	<1.5	0.13	<0.02	<0.1	0.13	<0.1	0.1	<0.1	<0.1	<0.1	5.9
Neosilurus hyrtlii	Flesh	122.0	12.7			62	0	28/05/2014	<1.5	<0.1	<0.05	0.16	0.18	<0.1	0.37	<0.1	<0.2	<0.2	9
Neosilurus hyrtlii	Flesh	101.0	6.5			63	0	28/05/2014	<1.5	<0.1	<0.05	0.29	0.19	<0.1	0.29	0.14	<0.2	<0.2	8.9
Neosilurus hyrtlii	Flesh	104.0	6.8			64	0	28/05/2014	<1.5	<0.1	<0.05	0.35	0.22	<0.1	0.39	0.2	<0.2	<0.2	12
Mogurnda mogurnda	Hind Body			20.5	0.2	65	0	22/05/2014	2.9	<0.1	<0.1	<0.1	0.33	0.12	75	<0.1	<0.4	<0.4	23
Mogurnda mogurnda	Hind Body			20.0	0.3	66	0	22/05/2014	3.1	<0.1	<0.1	<0.1	0.44	0.18	81	<0.1	<0.4	<0.4	28
Mogurnda mogurnda	Hind Body			22.0	0.4	67	0	22/05/2014	<1.5	<0.1	<0.1	<0.1	0.23	0.11	31	<0.1	<0.4	<0.4	18
Mogurnda mogurnda	Hind Body			24.0	0.4	68	0	22/05/2014	1.6	<0.1	<0.1	<0.1	0.34	0.28	15	<0.1	<0.4	<0.4	22
Mogurnda mogurnda	Hind Body			22.5	0.4	69	0	22/05/2014	1.7	<0.1	<0.1	<0.1	0.28	<0.1	30	<0.1	<0.4	<0.4	19
Macrobrachium bullatum	Cephalothorax	12.7	1.3			70	0	2/06/2014	5.5	0.3	<0.05	1	80	0.12	37	0.31	<0.2	<0.2	60
Macrobrachium bullatum	Cephalothorax	13.3	1.6			71	0	2/06/2014	7.2	0.56	0.2	2.3	140	<0.1	100	0.4	<0.2	<0.2	70
Macrobrachium bullatum	Cephalothorax	13.3	1.6			71	1	2/06/2014	7.3	0.54	0.2	2.3	140	<0.1	110	0.57	<0.1	<0.1	70
Macrobrachium bullatum	Cephalothorax	10.8	0.7			72	0	2/06/2014	25	0.48	0.24	2.3	170	0.38	27	0.5	<0.4	<0.4	50
Macrobrachium bullatum	Cephalothorax	13.2	1.9			73	0	29/05/2014	6.3	0.57	0.33	3.8	130	0.31	70	0.87	<0.2	<0.2	66
Macrobrachium bullatum	Cephalothorax	10.9	1.0			74	0	29/05/2014	8.7	0.44	0.27	5.1	110	0.44	120	1.2	<0.4	<0.4	89
Macrobrachium bullatum	Cephalothorax	10.2	0.9			75	0	29/05/2014	9.2	0.49	0.49	2.6	130	0.53	65	0.97	<0.4	<0.4	88
Macrobrachium bullatum	Cephalothorax	9.6	0.8			76	0	29/05/2014	16	0.47	0.32	2.8	180	0.62	23	0.73	<0.4	<0.4	83
Macrobrachium bullatum	Cephalothorax	8.9	0.7			77	0	29/05/2014	5.1	0.5	0.3	3.4	170	0.22	52	0.73	<0.4	<0.4	73
Macrobrachium bullatum	Cephalothorax	13.3	1.9			78	0	31/05/2014	6.1	0.39	0.2	9.4	100	0.12	250	1.7	<0.2	<0.2	88
Macrobrachium bullatum	Cephalothorax	11.3	1.3			79	0	31/05/2014	6.9	0.63	0.53	6.1	140	0.14	210	1	<0.2	<0.2	86
Macrobrachium bullatum	Cephalothorax	11.2	1.0			80	0	31/05/2014	3.4	0.81	0.48	2.1	170	<0.1	64	0.22	<0.2	<0.2	64
Macrobrachium bullatum	Cephalothorax	11.2	1.1			81	0	31/05/2014	2.2	0.48	0.32	1.3	130	<0.1	56	0.19	<0.2	<0.2	66
Macrobrachium bullatum	Cephalothorax	11.2	1.1			81	1	31/05/2014	2.2	0.6	0.32	1.3	130	<0.1	56	0.18	<0.1	<0.1	67
Macrobrachium bullatum	Cephalothorax	11.4	1.0			82	0	31/05/2014	2.7	0.52	0.67	1.9	120	<0.1	66	0.26	<0.1	<0.1	93
Macrobrachium bullatum	Cephalothorax	12.0	1.5			83	0	28/05/2014	6.3	0.79	0.22	6.7	160	0.32	71	0.93	<0.1	<0.1	91
Macrobrachium bullatum	Cephalothorax	13.5	1.5			84	0	28/05/2014	8.1	0.35	0.2	13	130	0.24	120	2	<0.1	<0.1	100
Macrobrachium bullatum	Cephalothorax	10.2	0.7			85	0	28/05/2014	4.3	0.42	0.31	2.6	84	0.22	73	0.8	<0.4	<0.4	100
Macrobrachium bullatum	Cephalothorax	8.0	0.7			86	0	28/05/2014	11	0.62	0.25	4.8	120	0.31	120	1.1	<0.4	<0.4	88
Macrobrachium bullatum	Cephalothorax	12.4	1.4			87	0	28/05/2014	1.6	<0.1	0.13	1.5	94	<0.1	18	0.35	<0.2	<0.2	72
Macrobrachium bullatum	Cephalothorax	11.6	1.5			88	0	29/05/2014	6.1	0.43	0.39	2.8	110	0.15	22	0.83	<0.2	<0.2	100
Macrobrachium bullatum	Cephalothorax	13.6	2.0			89	0	29/05/2014	15	0.34	0.22	6	160	0.23	56	2.3	<0.1	<0.1	110
Macrobrachium bullatum	Cephalothorax	14.6	1.9			90	0	29/05/2014	30	0.8	0.5	4.8	130	0.58	33	1.7	<0.2	<0.2	150
Macrobrachium bullatum	Cephalothorax	13.4	1.8			91	0	29/05/2014	7	0.27	0.46	1.5	120	0.16	19	0.76	<0.1	<0.1	86
Macrobrachium bullatum	Cephalothorax	13.4	1.8			91	1	29/05/2014	7.1	0.27	0.46	1.5	120	0.15	20	0.76	<0.1	<0.1	87
Macrobrachium bullatum	Cephalothorax	12.7	1.5			92	0	29/05/2014	12	0.75	0.3	2.9	160	0.21	24	1.5	<0.2	<0.2	130
Macrobrachium bullatum	Cephalothorax	10.4	0.9			93	0	6/06/2014	6	0.5	0.21	1.4	120	<0.1	58	0.36	<0.4	<0.4	70
Macrobrachium bullatum	Cephalothorax	10.6	0.7			94	0	6/06/2014	7.3	0.63	0.24	0.69	62	<0.1	24	0.24	<0.1	<0.1	59
Macrobrachium bullatum	Cephalothorax	8.3	0.5			95	0	6/06/2014	13	0.51	0.12	0.91	140	0.31	35	0.25	<0.1	<0.1	65
Macrobrachium bullatum	Cephalothorax	11.9	1.4			96	0	6/06/2014	6.4	0.29	0.21	1	110	<0.1	53	0.24	<0.2	<0.2	73
Macrobrachium bullatum	Cephalothorax	13.5	1.9			97	0	3/06/2014	18	0.47	0.3	2.3	100	0.11	200	0.99	<0.2	<0.2	100
Macrobrachium bullatum	Cephalothorax	9.9	0.8			98	0	1/06/2014	5.6	0.42	0.16	1.6	120	0.11	20	0.33	<0.1	<0.1	67

Species	Tissue Type	Length (mm)	Weight (g)	Dissected Length (mm)	Dissected Weight (g)	Sample No.	Replicate	Date sampled	Aluminium (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Thorium (mg/kg)	Uranium (mg/kg)	Zinc (mg/kg)
Mogurnda mogurnda	Hind Body			53.5	5.9	99	0	25/05/2014	<1.5	0.17	<0.02	0.19	0.25	0.68	9	0.14	<0.1	<0.1	16
Mogurnda mogurnda	Hind Body			36.0	2.0	100	0	25/05/2014	<1.5	0.16	<0.02	0.22	0.26	0.14	7.5	0.14	<0.1	<0.1	22
Mogurnda mogurnda	Hind Body			40.5	4.7	101	0	25/05/2014	<1.5	0.12	<0.02	0.18	0.3	0.81	12	0.13	<0.1	<0.1	23
Mogurnda mogurnda	Hind Body			40.5	4.7	101	1	25/05/2014	<1.5	0.13	<0.02	0.18	0.29	0.81	12	0.12	<0.1	<0.1	23
Mogurnda mogurnda	Hind Body			36.0	2.1	102	0	25/05/2014	<1.5	<0.1	<0.02	0.15	0.25	0.1	6.8	0.1	<0.1	<0.1	21
Mogurnda mogurnda	Hind Body			37.0	2.6	103	0	25/05/2014	<1.5	0.14	<0.02	0.19	0.25	0.32	9.2	0.12	<0.1	<0.1	25
Mogurnda mogurnda	Hind Body	97.0	10.9	44.0	3.0	104	0	2/06/2014	<1.5	0.15	<0.02	0.13	0.16	0.56	20	<0.1	<0.1	<0.1	17
Mogurnda mogurnda	Hind Body	52.0	1.5	29.0	0.7	105	0	3/06/2014	<1.5	<0.1	<0.05	<0.1	0.17	0.19	11	<0.1	<0.2	<0.2	22
Mogurnda mogurnda	Hind Body	64.5	2.6	23.0	0.5	106	0	3/06/2014	<1.5	<0.1	<0.1	<0.1	0.22	0.44	30	<0.1	<0.4	<0.4	25
Mogurnda mogurnda	Hind Body			29.0	0.9	107	0	26/05/2014	<1.5	<0.1	<0.05	<0.1	0.32	1.8	38	<0.1	<0.2	<0.2	22
Mogurnda mogurnda	Hind Body			37.0	2.3	108	0	26/05/2014	<1.5	0.13	<0.02	<0.1	0.17	0.23	24	<0.1	<0.1	<0.1	20
Mogurnda mogurnda	Hind Body			45.0	2.8	109	0	26/05/2014	<1.5	0.14	<0.02	<0.1	0.18	0.12	21	<0.1	<0.1	<0.1	18
Mogurnda mogurnda	Hind Body			35.0	1.7	110	0	26/05/2014	<1.5	0.13	<0.02	<0.1	0.17	0.61	28	<0.1	<0.1	<0.1	19
Mogurnda mogurnda	Hind Body			45.0	2.9	111	0	26/05/2014	<1.5	0.13	<0.02	<0.1	0.17	0.29	23	<0.1	<0.1	<0.1	19
Mogurnda mogurnda	Hind Body			45.0	2.9	111	1	26/05/2014	<1.5	0.13	<0.02	<0.1	0.17	0.31	23	<0.1	<0.1	<0.1	20
Mogurnda mogurnda	Hind Body			35.0	1.5	112	0	23/05/2014	<1.5	0.12	<0.02	<0.1	0.22	0.46	25	<0.1	<0.1	<0.1	21
Mogurnda mogurnda	Hind Body			38.0	2.1	113	0	23/05/2014	<1.5	0.16	<0.02	<0.1	0.5	0.32	26	<0.1	<0.1	<0.1	27
Mogurnda mogurnda	Hind Body			43.0	2.4	114	0	23/05/2014	<1.5	0.11	<0.02	<0.1	0.19	0.32	19	<0.1	<0.1	<0.1	21
Mogurnda mogurnda	Hind Body			39.0	2.3	115	0	23/05/2014	<1.5	<0.1	<0.02	<0.1	0.22	0.36	25	<0.1	<0.1	<0.1	23
Mogurnda mogurnda	Hind Body			37.0	2.2	116	0	23/05/2014	<1.5	0.18	<0.02	<0.1	0.26	0.68	27	<0.1	<0.1	<0.1	19
Mogurnda mogurnda	Hind Body	77.0	5.3	37.0	1.5	117	0	31/05/2014	<1.5	0.16	<0.02	0.3	0.36	0.35	15	0.18	<0.1	<0.1	19
Mogurnda mogurnda	Hind Body	75.0	4.8	36.0	1.6	118	0	31/05/2014	<1.5	0.12	<0.02	0.27	0.24	1.4	39	0.12	<0.1	<0.1	22
Mogurnda mogurnda	Hind Body	77.0	4.8	33.0	1.2	119	0	31/05/2014	<1.5	<0.1	<0.05	0.28	0.24	0.46	23	0.15	<0.2	<0.2	23
Mogurnda mogurnda	Hind Body	79.0	5.5	40.0	1.8	120	0	31/05/2014	<1.5	0.15	<0.02	0.25	0.21	0.59	33	0.13	<0.1	<0.1	21
Mogurnda mogurnda	Hind Body	72.0	3.9	36.0	1.3	121	0	31/05/2014	<1.5	0.13	<0.02	0.31	0.23	0.12	36	0.14	<0.1	<0.1	26
Mogurnda mogurnda	Hind Body	72.0	3.9	36.0	1.3	121	1	31/05/2014	<1.5	0.16	<0.02	0.31	0.23	0.14	37	0.14	<0.1	<0.1	26
Mogurnda mogurnda	Hind Body	87.0	7.5	40.0	2.1	122	0	29/05/2014	<1.5	0.16	<0.02	0.2	0.26	<0.1	18	0.15	<0.1	<0.1	19
Mogurnda mogurnda	Hind Body	82.5	6.6	39.0	1.5	123	0	29/05/2014	<1.5	0.17	<0.02	0.32	0.42	0.13	22	0.21	<0.1	<0.1	29
Mogurnda mogurnda	Hind Body	78.0	6.2			124	0	29/05/2014	<1.5	0.1	<0.02	0.2	0.24	1	30	0.11	<0.1	<0.1	20
Mogurnda mogurnda	Hind Body	92.0	9.1			125	0	29/05/2014	<1.5	<0.1	<0.02	0.22	0.3	0.95	18	0.19	<0.1	<0.1	25
Mogurnda mogurnda	Hind Body	76.0	5.7			126	0	29/05/2014	<1.5	0.12	<0.02	0.37	0.46	0.13	25	0.26	<0.1	<0.1	24
Mogurnda mogurnda	Hind Body	87.0	9.0			127	0	29/05/2014	<1.5	0.13	<0.02	0.14	0.25	0.68	17	0.11	<0.1	<0.1	25
Mogurnda mogurnda	Hind Body	99.5	0.3			128	0	28/05/2014	<1.5	0.13	<0.02	<0.1	0.18	1.9	34	<0.1	<0.1	<0.1	19
Mogurnda mogurnda	Hind Body	93.0	9.1			129	0	28/05/2014	<1.5	0.11	<0.02	0.13	0.27	0.31	21	<0.1	<0.1	<0.1	22
Mogurnda mogurnda	Hind Body	84.5	7.2			130	0	28/05/2014	<1.5	0.14	<0.02	<0.1	0.23	0.16	31	<0.1	<0.1	<0.1	23
Mogurnda mogurnda	Hind Body	76.0	5.0			131	0	28/05/2014	<1.5	0.13	<0.02	0.12	0.24	0.15	18	<0.1	<0.1	<0.1	25
Mogurnda mogurnda	Hind Body	76.0	5.0			131	1	28/05/2014	<1.5	0.19	<0.02	0.12	0.24	0.15	18	<0.1	<0.1	<0.1	25
Mogurnda mogurnda	Hind Body	66.5	3.4			132	0	28/05/2014	<1.5	<0.1	<0.05	0.2	0.3	0.43	28	0.15	<0.2	<0.2	26
Mogurnda mogurnda	Hind Body	53.0	1.8			133	0	1/06/2014	<1.5	0.11	<0.1	0.2	0.26	0.41	89	<0.1	<0.4	<0.4	29
Mogurnda mogurnda	Hind Body	72.0	4.2			134	0	1/06/2014	<1.5	0.16	<0.02	0.13	0.2	1.1	32	<0.1	<0.1	<0.1	28
Mogurnda mogurnda	Hind Body	68.0	2.8			135	0	1/06/2014	2.1	0.56	<0.1	0.54	0.73	2.6	190	0.21	<0.4	<0.4	71
Melanotaenia nigrans	Whole Body	41.0	0.5			136	0	3/06/2014	3.5	<0.1	<0.05	0.11	0.55	<0.1	10	<0.1	<0.2	<0.2	68
Melanotaenia nigrans	Whole Body	36.0	0.4			137	0	2/06/2014	3.1	<0.1	<0.1	<0.1	0.56	<0.1	20	<0.1	<0.4	<0.4	73
Melanotaenia nigrans	Whole Body	37.5	0.4			138	0	31/05/2014	5.6	<0.1	<0.1	0.53	2.2	<0.1	19	0.19	<0.4	<0.4	49
Melanotaenia nigrans	Whole Body	43.0	0.6			139	0	31/05/2014	8.5	<0.1	<0.05	0.69	6.3	0.22	28	0.3	<0.2	<0.2	70
Melanotaenia nigrans	Whole Body	38.0	0.6			140	0	31/05/2014	3.7	<0.1	<0.1	0.49	5	0.16	29	0.15	<0.4	<0.4	57
Melanotaenia nigrans	Whole Body	33.0	0.3			141	0	31/05/2014	10	0.17	<0.1	0.72	2.8	0.72	20	0.31	<0.4	<0.4	54
Melanotaenia nigrans	Whole Body	33.0	0.3			141	1	31/05/2014	10	0.22	<0.1	0.72	2.8	0.76	20	0.32	<0.4	<0.4	54
Melanotaenia nigrans	Whole Body	36.0	0.4			142	0	31/05/2014	14	0.23	<0.1	0.96	5.5	0.38	33	0.37	<0.4	<0.4	62
Melanotaenia nigrans	Whole Body	42.0	0.9			143	0	29/05/2014	3.2	0.15	0.054	0.38	3.1	0.14	23	0.27	<0.2	<0.2	78
Melanotaenia nigrans	Whole Body	46.0	1.1			144	0	29/05/2014	2.2	0.17	<0.1	0.35	4.2	0.13	19	0.24	<0.4	<0.4	69
Melanotaenia nigrans	Whole Body	58.0	2.2			145	0	29/05/2014	2.6	0.15	0.046	0.44	6	<0.1	31	0.33	<0.1	<0.1	64
Melanotaenia nigrans	Whole Body	52.0	2.0			146	0	29/05/2014	1.9	0.13	0.056	0.34	2.5	<0.1	27	0.26	<0.1	<0.1	68
Melanotaenia nigrans	Whole Body	50.0	1.4			147	0	29/05/2014	1.5	0.16	0.032	0.5	6.1	<0.1	44	0.35	<0.1	<0.1	67
Melanotaenia nigrans	Whole Body	30.0	0.2			148	0	28/05/2014	13	<0.1	<0.1	1.3	7.7	0.25	61	0.51	<0.4	<0.4	54
Melanotaenia nigrans	Whole Body	44.0	0.8			149	0	28/05/2014	2.7	<0.1	<0.05	0.33	2.7	0.11	19	0.18	<0.2	<0.2	40
Melanotaenia nigrans	Whole Body	37.0	0.5			150	0	28/05/2014	3	<0.1	<0.1	0.34	2.9	<0.1	16	0.2	<0.4	<0.4	68
Melanotaenia nigrans	Whole Body	34.0	0.4			151	0	28/05/2014	3.7	<0.1	<0.1	0.25	1.9	0.12	11	0.2	<0.4	<0.4	58
Melanotaenia nigrans	Whole Body	34.0	0.4			151	1	28/05/2014	3.9	<0.1	<0.1	0.27	1.9	0.13	11	0.2	<0.4	<0.4	57
Melanotaenia nigrans	Whole Body			34.0	0.3	152	0	22/05/2014	3.8	<0.1	<0.1	<0.1	0.92	0.2	6.2	<0.1	<0.4	<0.4	57
Melanotaenia nigrans	Whole Body			31.0	0.3	153	0	22/05/2014	2	<0.1	<0.1	<0.1	1	<0.1	7.6	<0.1	<0.4	<0.4	54
Melanotaenia nigrans	Whole Body			35.0	0.4	154	0	22/05/2014	2.4	<0.1	<0.1	<0.1	0.55	0.15	21	<0.1	<0.4	<0.4	51
Melanotaenia nigrans	Whole Body			35.0	0.4	155	0	22/05/2014	2.4	<0.1	<0.1	<0.1	0.82	<0.1	5.7	<0.1	<0.4	<0.4	49
Melanotaenia nigrans	Whole Body			28.0	0.2	156	0	22/05/2014	3.1	0.11	<0.1	<0.1	0.68	<0.1	7.9	<0.1	<0.4	<0.4	60
Melanotaenia nigrans	Whole Body			25.0	0.2	157	0	23/05/2014	6.6	0.13	<0.1	<0.1	0.61	<0.1	33	<0.1	<0.4	<0.4	64
Melanotaenia nigrans	Whole Body			26.0	0.2	158	0	23/05/2014	4	0.12	<0.1	<0.1	0.53	<0.1	23	<0.1	<0.4	<0.4	63
Melanotaenia nigrans	Whole Body			31.0	0.3	159	0	23/05/2014	2.6	0.11	<0.1	<0.1	0.71	<0.1	25	<0.1	<0.4	<0.4	69
Melanotaenia nigrans	Whole Body			40.0	0.6	160	0	23/05/2014	1.8	<0.1	<0.05	<0.1	2.1	<0.1	17	<0.1	<0.2	<0.2	42
Melanotaenia nigrans	Whole Body			28.0	0.3	161	0	23/05/2014	2.3	<0.1	<0.1	<0.1	1.4	<0.1	26	<0.1	<0.4	<0.4	59
Melanotaenia nigrans	Whole Body			28.0	0.3	161	1	23/05/2014	2.8	<0.1	<0.1	<0.1	1.4	<0.1	26	<0.1	<0.4	<0.4	60
Melanotaenia nigrans	Whole Body			38.0	0.4	162	0	25/05/2014	6.8	<0.1	<0.1	0.92	7.8	<0.1	14	0.37	<0.4	<0.4	89
Melanotaenia nigrans	Whole Body			35.0	0.4	163	0	25/05/2014	3.6	<0.1	<0.1	0.57	7.6	0.19	8.8	0.2	<0.4	<0.4	72
Melanotaenia nigrans	Whole Body			34.0	0.3	164	0	25/05/2014	2.7	<0.1	0.1	0.71	14	<0.1	15	0.27	<0.4	<0.4	110
Melanotaenia nigrans	Whole Body			34.0	0.4	165	0	25/05/2014	2.3	<0.1	<0.1	0.69	6.3	<0.1	14	0.19	<0.4	<0.4	98
Melanotaenia nigrans	Whole Body			31.0	0.3	166	0	25/05/2014	13	0.17	<0.1	0.71	9.2	0.13	18	0.25	<0.4	<0.4	110
Melanotaenia nigrans	Whole Body			40.0	0.6	167	0	26/05/2014	2.2	<0.1	<0.05	0.65	3.5	0.18	17	0.38	<0.2	<0.2	52
Melanotaenia nigrans	Whole Body			35.0	0.3	168	0	26/05/2014	2.1	0.11	<0.1	0.23	3.2	<0.1	25	0.13	<0.4	<0.4	57
Melanotaenia nigrans	Whole Body			35.0	0.3	169	0	26/05/2014	2.1	<0.1	<0.1	0.3	1.8	0.29	20	0.17	<0.4	<0.4	64
Melanotaenia nigrans	Whole Body			24.0	0.2	170	0	26/05/2014	3.6	<0.1	<0.1	0.19	1.2	<0.1	18	<0.1	<0.4	<0.4	54
Melanotaenia nigrans	Whole Body			33.0	0.2	171	0	26/05/2014	6.3	0.15	<0.1	0.87	4.8	0.13	40	0.43	<0.4	<0.4	67
Melanotaenia nigrans	Whole Body			33.0	0.2	171	1	26/05/2014	6.2	0.14	<0.1	0.83	4.7	0.12	39	0.39	<0.4	<0.4	66
Melanotaenia nigrans	Whole Body			37.0	0.4	172	0	26/05/2014	2	<0.1	<0.1	0.28	4.3	<0.1	20	0.17	<0.4	<0.4	57
Melanotaenia nigrans	Whole Body			34.0	0.4	173	0	26/05/2014	2.5	0.12	<0.1	0.32	4.1	<0.1	37	0.16	<0.4	<0.4	79
Melanotaenia nigrans	Whole Body			38.0	0.5	174	0	26/05/2014	2.1	<0.1	<0.1	0.2	1.1	<0.1	24	0.12	<0.4	<0.4	62
Melanotaenia nigrans	Whole Body			39.0	0.4	175	0	26/05/2014	1.7	<0.1	<0.1	0.18	2.6	<0.1	23	0.1	<0.4	<0.4	65
Melanotaenia nigrans	Whole Body			41.0	0.5	176	0	26/05/2014	2	<0.1	<0.1	0.21	1.4	<0.1	26	0.13	<0.4	<0.4	59
Mogurnda mogurnda	Hind Body			30.0	0.9	177	0	26/05/2014	<1.5	<0.1	<0.05	0.66	0.83	0.46	51	0.33	<0.2	<0.2	23
Mogurnda mogurnda	Hind Body			36.0	2.2	178	0	26/05/2014	<1.5	<0.1	<0.02	0.18	0.32	0.39	29	0.1	<0.1	<0.1	21
Mogurnda mogurnda	Hind Body			35.0	1.3	179	0	26/05/2014	<1.5	0.13	<0.02	0.25	0.29	0.63	15	0.13	<0.1	<0.1	27
Mogurnda mogurnda	Hind Body			30.0	0.9	180	0	26/05/2014	<1.5	<0.1	<0.05	0.51	0.44	0.45	70	0.25	<0.2	<0.2	30
Mogurnda mogurnda	Hind Body			49.0	4.0	181	0	26/05/2014	<1.5	0.11	<0.02	0.13	0.21	0.32	38	0.12	<0.1	<0.1	22
Mogurnda mogurnda	Hind Body			49.0	4.0	181	1	26/05/2014	<1.5	0.14	<0.02	0.13	0.22	0.34	39	0.12	<0.1	<0.1	22

APPENDIX 4 2015 TISSUE METALS

Site	Location	Date	Species	Tissue Type	Length (mm)	Weight (g)	Aluminium (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Thorium (mg/kg)	Uranium (mg/kg)	Zinc (mg/kg)
FRusMB	U/S of East Branch	20/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.3	1.3	1.6	0.28	0.037	<0.1	43	<0.1	4.4	<0.1	<0.1	<0.1	45
FRusMB	U/S of East Branch	20/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.3	1.3	1.6	0.28	0.034	<0.1	43	<0.1	4.2	<0.1	<0.1	<0.1	44
FRusMB	U/S of East Branch	20/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.9	1.2	5.8	0.36	0.035	<0.1	17	<0.1	11	<0.1	<0.1	<0.1	41
FRdsMB	U/S of East Branch	19/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.4	1.2	17	0.3	0.04	1.2	43	0.18	79	0.28	<0.1	<0.1	47
FRdsMB	U/S of East Branch	19/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.9	0.7	4.4	0.3	<0.02	0.15	84	0.12	10	0.24	<0.1	<0.1	35
FRdsMB	U/S of East Branch	19/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.1	0.5	9.1	0.12	0.029	0.15	38	<0.1	17	0.18	<0.1	<0.1	37
FRdsMB	U/S of East Branch	19/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.2	0.4	15	0.16	0.13	0.15	130	0.25	19	0.24	<0.1	<0.1	61
EB@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	13.0	2.0	2.4	0.13	0.3	0.14	44	<0.1	5.5	<0.1	<0.1	<0.1	66
EB@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	12.2	1.7	2.7	0.14	0.25	0.25	73	0.1	17	<0.1	<0.1	<0.1	86
FC@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.6	1.1	<1.5	<0.1	0.088	<0.1	77	<0.1	1.9	<0.1	<0.1	<0.2	68
FC@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	12.5	1.7	1.7	0.16	0.075	0.19	63	<0.1	7.8	0.14	<0.1	<0.1	46
FC@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	13.3	1.8	<1.5	0.18	0.24	0.3	91	<0.1	1.8	<0.1	<0.1	<0.1	44
FC@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	13.3	1.8	<1.5	0.17	0.23	0.31	90	<0.1	1.8	<0.1	<0.1	<0.1	43
FC@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.8	1.1	<1.5	0.21	0.12	0.29	130	<0.1	4.5	0.16	<0.1	<0.1	57
FC@LB	U/S of East Branch	21/05/2015	*Macrobrachium bullatum*	Cephalothorax	14.9	1.8	1.5	0.11	0.22	<0.1	120	<0.1	1.2	<0.1	<0.1	<0.1	50
EB@GS327	East Branch	24/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.4	1.2	2.6	0.35	0.68	2.2	40	<0.1	19	0.54	<0.1	<0.1	55
EB@GS327	East Branch	24/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.2	0.8	2.4	0.36	0.19	3.4	74	<0.1	22	0.77	<0.1	<0.1	57
EB@GS327	East Branch	24/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.3	1.1	2.9	0.21	0.19	5.5	86	<0.1	36	0.74	<0.1	<0.1	61
EB@GS327	East Branch	24/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.9	0.8	6.6	0.23	0.19	4.6	41	<0.1	47	0.92	<0.1	<0.1	79
EB@GS327	East Branch	24/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.9	0.9	2.3	0.2	0.17	2.4	76	<0.1	26	0.68	<0.1	<0.1	66
EB@RB	East Branch	22/05/2015	*Macrobrachium bullatum*	Cephalothorax	12.4	0.6	100	0.27	0.16	1.4	59	1.8	260	0.42	<0.1	<0.1	100
EB@RB	East Branch	22/05/2015	*Macrobrachium bullatum*	Cephalothorax	8.8	0.6	4	0.41	0.22	4.9	84	0.49	22	0.53	<0.1	<0.1	77
EB@RB	East Branch	22/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.5	0.9	3	0.4	0.078	4.6	100	0.17	19	0.44	<0.1	<0.1	69
EB@RB	East Branch	22/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.5	0.9	3	0.39	0.083	4.6	100	0.16	19	0.47	<0.1	<0.1	70
EB@RB	East Branch	22/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.9	1.0	4.5	0.35	0.34	4.2	110	0.16	31	0.48	<0.1	<0.1	64
EB@RB	East Branch	22/05/2015	*Macrobrachium bullatum*	Cephalothorax	13.6	2.1	48	0.24	0.29	18	80	0.57	130	2.8	<0.1	<0.3	130
EBusHS	East Branch	25/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.4	0.8	1.7	0.23	0.13	2.4	84	<0.1	28	0.25	<0.1	<0.1	35
EBusHS	East Branch	25/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.8	1.0	9.9	0.24	0.13	18	84	0.11	310	1.7	<0.1	<0.1	70
EBusHS	East Branch	25/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.8	1.4	3.7	0.26	0.1	6.7	73	<0.1	110	0.69	<0.1	<0.1	59
EBusHS	East Branch	25/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.7	1.0	<1.5	0.24	0.13	4	91	<0.1	59	0.47	<0.1	<0.1	79
EBusHS	East Branch	25/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.0	0.7	3.5	0.2	0.094	5.4	81	<0.1	72	0.53	<0.1	<0.1	50
EBdsHS	East Branch	23/05/2015	*Macrobrachium bullatum*	Cephalothorax	17.1	3.5	11	0.52	0.21	22	150	0.31	590	3.5	<0.1	<0.1	81
EBdsHS	East Branch	23/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.2	0.9	12	0.31	0.16	4.7	87	0.39	51	0.7	<0.1	<0.1	58
EBdsHS	East Branch	23/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.6	1.0	12	0.34	0.2	2	120	0.48	23	0.5	<0.1	<0.1	43
EBdsHS	East Branch	23/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.6	1.0	12	0.35	0.2	2	110	0.43	23	0.49	<0.1	<0.1	42
EBdsHS	East Branch	23/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.2	0.8	8.6	0.25	0.1	2.8	82	0.54	32	0.51	<0.1	<0.1	47
EBdsHS	East Branch	23/05/2015	*Macrobrachium bullatum*	Cephalothorax	8.9	0.7	9.3	0.33	0.09	21	120	0.26	460	3.2	<0.1	<0.1	70
EBusFR	East Branch	26/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.4	1.2	13	0.26	0.2	5	120	0.2	180	0.97	<0.1	<0.1	69
EBusFR	East Branch	26/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.6	1.0	6.6	0.35	0.23	11	140	0.12	360	1.8	<0.1	<0.1	58
EBusFR	East Branch	26/05/2015	*Macrobrachium bullatum*	Cephalothorax	13.6	1.8	3.5	0.23	0.17	1.4	130	<0.1	38	0.29	<0.1	<0.1	38
EBusFR	East Branch	26/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.7	0.9	4.9	0.32	0.23	2.5	96	<0.1	57	0.49	<0.1	<0.1	53
EBusFR	East Branch	26/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.9	1.0	33	0.28	0.34	32	140	0.49	870	4.5	<0.1	<0.1	100
FR@GS204	D/S of East Branch	27/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.6	0.7	4.9	0.28	0.19	3.1	120	0.15	84	0.69	<0.1	<0.1	57
FR@GS204	D/S of East Branch	27/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.1	1.0	4.6	0.37	0.27	0.64	140	0.16	14	0.2	<0.1	<0.1	52
FR@GS204	D/S of East Branch	27/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.6	0.8	4.6	0.42	0.25	2.9	130	0.19	99	0.42	<0.1	<0.1	51
FR@GS204	D/S of East Branch	27/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.6	0.8	4.4	0.41	0.23	2.8	130	0.15	95	0.4	<0.1	<0.1	49
FR@GS204	D/S of East Branch	27/05/2015	*Macrobrachium bullatum*	Cephalothorax	7.3	0.4	4	0.29	0.24	1.7	120	<0.1	48	0.43	<0.1	<0.1	53
FR@GS204	D/S of East Branch	27/05/2015	*Macrobrachium bullatum*	Cephalothorax	7.8	0.4	4.8	0.4	0.18	1.3	130	0.26	49	0.43	<0.1	<0.1	57
FR3	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.9	1.1	7.5	0.39	0.19	0.5	160	<0.1	13	0.16	<0.1	<0.1	55
FR3	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.8	0.9	2.4	0.3	0.16	0.65	70	<0.1	73	0.2	<0.1	<0.1	44
FR3	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.9	1.2	8.2	0.45	0.16	3.1	98	0.13	160	0.74	<0.1	<0.1	57
FR3	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.1	1.1	6.7	0.24	0.12	0.67	95	<0.1	16	0.22	<0.1	<0.1	35
FR3	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.6	0.9	4	0.39	0.35	1.1	100	0.13	58	0.5	<0.1	<0.1	48
FRusFC	D/S of East Branch	30/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.2	1.4	2.8	0.41	0.27	0.42	150	<0.1	10	0.31	<0.1	<0.1	41
FRusFC	D/S of East Branch	30/05/2015	*Macrobrachium bullatum*	Cephalothorax	12.3	1.6	3.6	0.35	0.23	0.69	130	<0.1	37	0.28	<0.1	<0.1	51
FRusFC	D/S of East Branch	30/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.2	1.0	7.2	0.3	0.13	0.57	120	<0.1	26	0.38	<0.1	<0.1	56
FRusFC	D/S of East Branch	30/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.2	1.0	5.4	0.3	0.13	0.57	120	<0.1	25	0.39	<0.1	<0.1	55
FRusFC	D/S of East Branch	30/05/2015	*Macrobrachium bullatum*	Cephalothorax	9.3	0.8	15	0.38	0.1	2.5	110	<0.1	220	1.3	<0.1	<0.1	62
FRusFC	D/S of East Branch	30/05/2015	*Macrobrachium bullatum*	Cephalothorax	8.8	0.7	5.1	0.33	0.082	0.97	110	<0.1	57	0.45	<0.1	<0.1	47
FRdsFC	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	13.2	1.9	3	0.33	0.11	0.29	110	<0.1	7.3	0.12	<0.1	<0.1	52
FRdsFC	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	11.9	1.6	5.8	0.46	0.2	3.6	72	<0.1	160	1.3	<0.1	<0.1	72
FRdsFC	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	12.7	1.9	3.9	0.38	0.16	0.46	110	<0.1	8	0.25	<0.1	<0.1	60
FRdsFC	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.2	1.1	3.5	0.29	0.12	0.78	120	<0.1	17	0.24	<0.1	<0.1	59
FRdsFC	D/S of East Branch	29/05/2015	*Macrobrachium bullatum*	Cephalothorax	10.4	0.8	<1.5	0.27	0.32	0.34	130	<0.1	7.4	0.19	<0.1	<0.1	41
FRusMB	U/S of East Branch	20/05/2015	*Nematalosa erebi*	Flesh	113.0	22.8	<1.5	<0.1	<0.02	<0.1	0.39	<0.1	0.63	<0.1	<0.1	<0.1	3.3
FRusMB	U/S of East Branch	20/05/2015	*Nematalosa erebi*	Flesh	116.0	27.8	<1.5	<0.1	<0.02	<0.1	0.33	<0.1	0.52	<0.1	<0.1	<0.1	3.3
FRusMB	U/S of East Branch	20/05/2015	*Neosilurus hyrtlii*	Flesh	192.0	50.2	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.16	<0.1	<0.1	<0.1	7.9
FRusMB	U/S of East Branch	20/05/2015	*Neosilurus hyrtlii*	Flesh	192.0	50.2	<1.5	<0.1	<0.02	<0.1	0.13	<0.1	0.16	<0.1	<0.1	<0.1	7.9
FRusMB	U/S of East Branch	20/05/2015	*Neosilurus hyrtlii*	Flesh	195.0	54.5	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	0.11	<0.1	<0.1	<0.1	9.2
FRusMB	U/S of East Branch	20/05/2015	*Neosilurus hyrtlii*	Flesh	192.0	54.2	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	0.1	<0.1	<0.1	<0.1	11
FRusMB	U/S of East Branch	20/05/2015	*Neosilurus hyrtlii*	Flesh	203.0	68.5	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.12	<0.1	<0.1	<0.1	8.6
FRusMB	U/S of East Branch	20/05/2015	*Nematalosa erebi*	Flesh	125.0	41.5	<1.5	<0.1	<0.02	<0.1	0.32	<0.1	0.53	<0.1	<0.1	<0.1	3.1
FRusMB	U/S of East Branch	20/05/2015	*Nematalosa erebi*	Flesh	119.0	35.6	<1.5	0.19	<0.02	<0.1	0.4	<0.1	1.4	<0.1	<0.1	<0.1	4
FRusMB	U/S of East Branch	20/05/2015	*Nematalosa erebi*	Flesh	117.0	31.6	<1.5	0.13	<0.02	<0.1	0.36	<0.1	0.92	<0.1	<0.1	<0.1	3.6
FRdsMB	U/S of East Branch	19/05/2015	*Neosilurus hyrtlii*	Flesh	205.0	57.5	<1.5	<0.1	<0.02	<0.1	0.14	<0.1	<0.1	<0.1	<0.1	<0.1	8.9
FRdsMB	U/S of East Branch	19/05/2015	*Nematalosa erebi*	Flesh	254.0	304.9	<1.5	<0.1	<0.02	<0.1	0.22	<0.1	1.3	<0.1	<0.1	<0.1	3.9
FRdsMB	U/S of East Branch	19/05/2015	*Neosilurus hyrtlii*	Flesh	251.0	104.2	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.17	<0.1	<0.1	<0.1	11
FRdsMB	U/S of East Branch	19/05/2015	*Neosilurus hyrtlii*	Flesh	167.0	34.8	<1.5	<0.1	<0.02	<0.1	0.16	<0.1	<0.1	<0.1	<0.1	<0.1	10
FRdsMB	U/S of East Branch	19/05/2015	*Neosilurus hyrtlii*	Flesh	167.0	34.8	<1.5	<0.1	<0.02	<0.1	0.14	<0.1	<0.1	<0.1	<0.1	<0.1	10
FRdsMB	U/S of East Branch	19/05/2015	*Neosilurus hyrtlii*	Flesh	234.0	102.2	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	0.16	<0.1	<0.1	<0.1	8.6
FRdsMB	U/S of East Branch	19/05/2015	*Neosilurus hyrtlii*	Flesh	186.0	48.9	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	0.39	<0.1	<0.1	<0.1	7.4
FRdsMB	U/S of East Branch	19/05/2015	*Nematalosa erebi*	Flesh	241.0	270.2	<1.5	<0.1	<0.02	<0.1	0.23	<0.1	2.1	<0.1	<0.1	<0.1	5.9
FRdsMB	U/S of East Branch	19/05/2015	*Nematalosa erebi*	Flesh	251.0	242.3	<1.5	0.14	<0.02	<0.1	0.15	<0.1	3.9	<0.1	<0.1	<0.1	4.7
FRdsMB	U/S of East Branch	19/05/2015	*Nematalosa erebi*	Flesh	264.0	312.0	<1.5	<0.1	<0.02	<0.1	0.32	<0.1	1.6	<0.1	<0.1	<0.1	5.6
FRdsMB	U/S of East Branch	19/05/2015	*Nematalosa erebi*	Flesh	250.0	282.3	<1.5	<0.1	<0.02	<0.1	0.25	<0.1	2.3	<0.1	<0.1	<0.1	5.4

Site	Location	Date	Species	Tissue Type	Length (mm)	Weight (g)	Aluminium (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Thorium (mg/kg)	Uranium (mg/kg)	Zinc (mg/kg)
EB@GS327	East Branch	24/05/2015	*Neosilurus hyrtlii*	Flesh	200.0	64.2	<1.5	<0.1	<0.02	<0.1	0.1	<0.1	0.34	<0.1	<0.1	<0.1	10
EB@GS327	East Branch	24/05/2015	*Neosilurus hyrtlii*	Flesh	192.0	52.1	<1.5	<0.1	<0.02	0.13	0.16	<0.1	0.2	<0.1	<0.1	<0.1	14
EB@GS327	East Branch	24/05/2015	*Neosilurus hyrtlii*	Flesh	226.0	102.1	<1.5	<0.1	<0.02	<0.1	0.13	<0.1	0.11	<0.1	<0.1	<0.1	11
EB@GS327	East Branch	24/05/2015	*Neosilurus hyrtlii*	Flesh	201.0	61.5	<1.5	<0.1	<0.02	0.11	0.11	<0.1	0.14	<0.1	<0.1	<0.1	7.6
EB@GS327	East Branch	24/05/2015	*Neosilurus hyrtlii*	Flesh	201.0	61.5	<1.5	<0.1	<0.02	0.12	0.093	<0.1	0.15	<0.1	<0.1	<0.1	7.8
EB@GS327	East Branch	24/05/2015	*Neosilurus hyrtlii*	Flesh	236.5	121.8	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	0.12	<0.1	<0.1	<0.1	8.7
EB@RB	East Branch	22/05/2015	*Neosilurus hyrtlii*	Flesh	106.0	8.3	<1.5	<0.1	<0.02	0.63	0.35	<0.1	0.46	0.3	<0.1	<0.1	12
EB@RB	East Branch	22/05/2015	*Neosilurus hyrtlii*	Flesh	95.5	6.5	<1.5	<0.1	<0.02	0.56	0.36	<0.1	0.26	0.27	<0.1	<0.1	12
EB@GS097	East Branch	23/05/2015	*Neosilurus hyrtlii*	Flesh	107.0	9.8	<1.5	<0.1	<0.02	0.19	0.29	<0.1	0.35	0.16	<0.1	<0.1	14
EB@GS097	East Branch	23/05/2015	*Neosilurus hyrtlii*	Flesh	99.0	6.7	<1.5	<0.1	<0.02	0.22	0.61	<0.1	0.74	0.19	<0.1	<0.1	9.7
EB@GS097	East Branch	23/05/2015	*Neosilurus hyrtlii*	Flesh	100.0	5.1	<1.5	<0.1	<0.02	0.31	0.63	<0.1	0.75	0.21	<0.1	<0.1	13
EBusHS	East Branch	25/05/2015	*Neosilurus hyrtlii*	Flesh	210.0	72.4	<1.5	<0.1	<0.02	0.11	0.16	<0.1	0.11	<0.1	<0.1	<0.1	10
EBusHS	East Branch	25/05/2015	*Neosilurus hyrtlii*	Flesh	193.0	61.5	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.13	<0.1	<0.1	<0.1	10
EBusHS	East Branch	25/05/2015	*Neosilurus hyrtlii*	Flesh	200.0	60.2	<1.5	<0.1	<0.02	<0.1	0.17	<0.1	0.21	<0.1	<0.1	<0.1	11
EBusHS	East Branch	25/05/2015	*Neosilurus hyrtlii*	Flesh	115.0	12.4	<1.5	<0.1	<0.02	0.15	0.19	<0.1	0.56	<0.1	<0.1	<0.1	11
EBusHS	East Branch	25/05/2015	*Neosilurus hyrtlii*	Flesh	115.0	12.4	<1.5	<0.1	<0.02	0.16	0.19	<0.1	0.57	<0.1	<0.1	<0.1	11
EBusHS	East Branch	25/05/2015	*Neosilurus hyrtlii*	Flesh	121.5	13.2	<1.5	<0.1	<0.02	<0.1	0.17	<0.1	0.34	<0.1	<0.1	<0.1	7.4
EBdsHS	East Branch	23/05/2015	*Neosilurus hyrtlii*	Flesh	104.5	8.0	<1.5	<0.1	<0.02	0.16	0.23	<0.1	0.24	<0.1	<0.1	<0.1	8
EBdsHS	East Branch	23/05/2015	*Neosilurus hyrtlii*	Flesh	104.0	7.7	<1.5	<0.1	<0.02	0.19	0.26	<0.1	0.43	<0.1	<0.1	<0.1	8.2
EBusFR	East Branch	26/05/2015	*Neosilurus hyrtlii*	Flesh	227.0	104.4	<1.5	<0.1	<0.02	<0.1	0.14	<0.1	0.19	<0.1	<0.1	<0.1	7.2
EBusFR	East Branch	26/05/2015	*Neosilurus hyrtlii*	Flesh	249.0	118.0	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	8.1
EBusFR	East Branch	26/05/2015	*Neosilurus hyrtlii*	Flesh	222.0	95.2	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	0.12	<0.1	<0.1	<0.1	8.8
EBusFR	East Branch	26/05/2015	*Neosilurus hyrtlii*	Flesh	249.0	125.1	<1.5	<0.1	<0.02	<0.1	0.12	<0.1	<0.1	<0.1	<0.1	<0.1	9.1
EBusFR	East Branch	26/05/2015	*Neosilurus hyrtlii*	Flesh	224.0	91.5	<1.5	<0.1	<0.02	0.11	0.15	<0.1	0.1	<0.1	<0.1	<0.1	12
EBusFR	East Branch	26/05/2015	*Nematalosa erebi*	Flesh	152.0	69.3	<1.5	0.1	<0.02	<0.1	0.59	<0.1	1.3	<0.1	<0.1	<0.1	4.7
EBusFR	East Branch	26/05/2015	*Nematalosa erebi*	Flesh	145.0	64.9	<1.5	<0.1	<0.02	<0.1	0.45	<0.1	1.4	<0.1	<0.1	<0.1	5
EBusFR	East Branch	26/05/2015	*Nematalosa erebi*	Flesh	145.0	64.9	<1.5	<0.1	<0.02	<0.1	0.43	<0.1	1.4	<0.1	<0.1	<0.1	5
EBusFR	East Branch	26/05/2015	*Nematalosa erebi*	Flesh	145.0	64.4	<1.5	<0.1	<0.02	<0.1	0.37	<0.1	1.4	<0.1	<0.1	<0.1	3.8
EBusFR	East Branch	26/05/2015	*Nematalosa erebi*	Flesh	148.0	63.0	<1.5	<0.1	<0.02	<0.1	0.35	<0.1	1.1	<0.1	<0.1	<0.1	4.3
EBusFR	East Branch	26/05/2015	*Nematalosa erebi*	Flesh	173.0	109.0	<1.5	0.12	<0.02	<0.1	0.45	<0.1	1.6	<0.1	<0.1	<0.1	4.6
FR@GS204	D/S of East Branch	27/05/2015	*Nematalosa erebi*	Flesh	128.0	38.1	<1.5	<0.1	<0.02	<0.1	0.34	<0.1	0.98	<0.1	<0.1	<0.1	3.1
FR@GS204	D/S of East Branch	27/05/2015	*Nematalosa erebi*	Flesh	274.0	349.3	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	4.4	<0.1	<0.1	<0.1	3.8
FR@GS204	D/S of East Branch	27/05/2015	*Nematalosa erebi*	Flesh	226.0	230.9	<1.5	<0.1	<0.02	<0.1	0.17	<0.1	1.8	<0.1	<0.1	<0.1	3.1
FR@GS204	D/S of East Branch	27/05/2015	*Nematalosa erebi*	Flesh	184.0	108.5	<1.5	<0.1	<0.02	<0.1	0.26	<0.1	0.98	<0.1	<0.1	<0.1	3.3
FR@GS204	D/S of East Branch	27/05/2015	*Nematalosa erebi*	Flesh	136.0	40.9	<1.5	<0.1	<0.02	<0.1	0.22	<0.1	1	<0.1	<0.1	<0.1	3.7
FR3	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	282.0	491.0	<1.5	0.12	<0.02	<0.1	0.18	<0.1	5	<0.1	<0.1	<0.2	3.6
FR3	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	267.0	399.8	<1.5	<0.1	<0.02	<0.1	0.2	<0.1	2.1	<0.1	<0.1	<0.1	3.2
FR3	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	267.0	399.8	<1.5	<0.1	<0.02	<0.1	0.22	<0.1	2.1	<0.1	<0.1	<0.1	3.2
FR3	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	281.0	376.2	<1.5	<0.1	<0.02	<0.1	0.3	<0.1	7.6	<0.1	<0.1	<0.1	4.5
FR3	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	274.0	350.6	<1.5	<0.1	<0.02	<0.1	0.19	<0.1	5.2	<0.1	<0.1	<0.1	4.3
FR3	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	232.0	256.6	<1.5	<0.1	<0.02	<0.1	0.2	<0.1	3	<0.1	<0.1	<0.1	3.1
FRusFC	D/S of East Branch	30/05/2015	*Nematalosa erebi*	Flesh	268.0	299.6	<1.5	<0.1	<0.02	<0.1	0.16	<0.1	6.4	<0.1	<0.1	<0.2	3.8
FRusFC	D/S of East Branch	30/05/2015	*Nematalosa erebi*	Flesh	290.0	387.3	<1.5	<0.1	<0.02	<0.1	0.14	<0.1	4.3	<0.1	<0.1	<0.2	3.7
FRusFC	D/S of East Branch	30/05/2015	*Nematalosa erebi*	Flesh	278.0	364.4	<1.5	<0.1	<0.02	<0.1	0.15	<0.1	7.3	<0.1	<0.1	<0.2	4.5
FRusFC	D/S of East Branch	30/05/2015	*Nematalosa erebi*	Flesh	273.0	358.3	<1.5	<0.1	<0.02	<0.1	0.2	<0.1	5.4	<0.1	<0.1	<0.1	3.9
FRusFC	D/S of East Branch	30/05/2015	*Nematalosa erebi*	Flesh	270.0	333.2	<1.5	<0.1	<0.02	<0.1	0.21	<0.1	4	<0.1	<0.1	<0.1	3.4
FRdsFC	D/S of East Branch	29/05/2015	*Nematalosa erebi*	Flesh	226.0	238.2	<1.5	<0.1	<0.02	<0.1	0.26	<0.1	5.4	<0.1	<0.1	<0.2	3.3
FRdsFC	D/S of East Branch	29/05/2015	*Nematalosa erebi*	Flesh	245.0	256.3	<1.5	<0.1	<0.02	<0.1	0.25	<0.1	3.5	<0.1	<0.1	<0.1	3.4
FRdsFC	D/S of East Branch	29/05/2015	*Nematalosa erebi*	Flesh	245.0	256.3	<1.5	<0.1	<0.02	<0.1	0.22	<0.1	3.5	<0.1	<0.1	<0.1	3.4
FRdsFC	D/S of East Branch	29/05/2015	*Nematalosa erebi*	Flesh	241.0	280.5	<1.5	<0.1	<0.02	<0.1	0.22	<0.1	2.8	<0.1	<0.1	<0.1	3.2
FRdsFC	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	244.0	117.0	<1.5	<0.1	<0.02	<0.1	0.089	<0.1	<0.1	<0.1	<0.1	<0.1	8
FRdsFC	D/S of East Branch	29/05/2015	*Neosilurus hyrtlii*	Flesh	224.0	90.9	<1.5	<0.1	<0.02	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	9.8
FRdsFC	D/S of East Branch	29/05/2015	*Nematalosa erebi*	Flesh	260.0	340.7	<1.5	<0.1	<0.02	<0.1	0.16	<0.1	4.3	<0.1	<0.1	<0.2	3.4
FRdsFC	D/S of East Branch	29/05/2015	*Nematalosa erebi*	Flesh	195.0	122.1	<1.5	<0.1	<0.02	<0.1	0.32	<0.1	3.8	<0.1	<0.1	<0.1	2.9
FRusMB	U/S of East Branch	20/05/2015	*Mogurnda mogurnda*	Hind Body	45.0	1.0	<1.5	<0.1	<0.02	<0.1	0.77	<0.1	6.7	<0.1	<0.1	<0.1	22
FRdsMB	U/S of East Branch	19/05/2015	*Mogurnda mogurnda*	Hind Body	39.0	0.5	<1.5	0.13	<0.02	<0.1	11	0.17	22	0.26	<0.1	<0.1	23
EB@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	34.0	0.4	<1.5	<0.1	<0.02	<0.1	1.9	<0.1	31	0.29	<0.1	<0.1	23
EB@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	43.0	0.9	<1.5	0.16	<0.02	1.7	4.7	<0.1	56	110	<0.1	<0.1	61
EB@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	35.0	0.4	<1.5	<0.1	<0.02	<0.1	0.48	<0.1	25	<0.1	<0.1	<0.1	22
EB@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	35.0	0.4	<1.5	<0.1	<0.02	<0.1	0.49	<0.1	25	<0.1	<0.1	<0.1	22
EB@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	33.0	0.4	<1.5	0.12	<0.02	<0.1	0.74	<0.1	36	<0.1	<0.1	<0.1	28
FC@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	63.0	4.7	<1.5	<0.1	<0.02	0.12	0.4	<0.1	10	<0.1	<0.1	<0.1	19
FC@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	52.0	2.3	<1.5	<0.1	<0.02	0.14	0.47	<0.1	15	<0.1	<0.1	<0.1	17
FC@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	51.5	1.9	<1.5	<0.1	<0.02	0.11	0.4	<0.1	12	<0.1	<0.1	<0.1	17
FC@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	49.5	1.9	<1.5	<0.1	<0.02	<0.1	0.43	<0.1	48	<0.1	<0.1	<0.1	18
FC@LB	U/S of East Branch	21/05/2015	*Mogurnda mogurnda*	Hind Body	50.0	1.6	<1.5	<0.1	<0.02	0.11	0.49	<0.1	23	<0.1	<0.1	<0.1	17
EB@GS200	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	113.0	21.5	<1.5	<0.1	<0.02	0.45	0.75	0.14	13	0.35	<0.1	<0.1	43
EB@GS200	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	93.0	12.9	<1.5	<0.1	<0.02	0.49	0.93	0.28	20	0.34	<0.1	<0.1	45
EB@GS200	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	71.0	3.8	<1.5	<0.1	<0.02	0.49	0.46	0.13	15	0.32	<0.1	<0.1	32
EB@GS200	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	99.0	11.2	<1.5	<0.1	<0.02	0.24	0.41	<0.1	6.5	0.2	<0.1	<0.1	14
EB@GS200	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	99.0	11.2	<1.5	<0.1	<0.02	0.23	0.4	<0.1	6.4	0.2	<0.1	<0.1	14
EB@GS200	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	41.0	0.5	<1.5	<0.1	<0.02	1.1	2.9	<0.1	27	0.47	<0.1	<0.1	43
EB@GS327	East Branch	24/05/2015	*Mogurnda mogurnda*	Hind Body	71.5	4.7	<1.5	<0.1	<0.02	0.29	0.36	0.31	31	0.16	<0.1	<0.1	25
EB@GS327	East Branch	24/05/2015	*Mogurnda mogurnda*	Hind Body	53.0	1.5	<1.5	<0.1	<0.02	0.36	0.78	<0.1	27	0.16	<0.1	<0.1	30
EB@GS327	East Branch	24/05/2015	*Mogurnda mogurnda*	Hind Body	58.0	2.4	<1.5	<0.1	<0.02	0.37	0.62	0.14	12	0.18	<0.1	<0.1	17
EB@GS327	East Branch	24/05/2015	*Mogurnda mogurnda*	Hind Body	51.0	1.5	<1.5	<0.1	<0.02	0.46	0.6	<0.1	24	0.28	<0.1	<0.1	25
EB@GS327	East Branch	24/05/2015	*Mogurnda mogurnda*	Hind Body	77.0	5.4	<1.5	<0.1	<0.02	0.29	0.59	<0.1	8.8	0.14	<0.1	<0.1	14
EB@RB	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	64.5	3.1	<1.5	<0.1	<0.02	0.24	0.44	0.17	27	0.16	<0.1	<0.1	22
EB@RB	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	61.0	2.7	<1.5	<0.1	<0.02	0.13	0.24	0.34	19	0.11	<0.1	<0.1	16

Site	Location	Date	Species	Tissue Type	Length (mm)	Weight (g)	Aluminium (mg/kg)	Arsenic (mg/kg)	Cadmium (mg/kg)	Cobalt (mg/kg)	Copper (mg/kg)	Lead (mg/kg)	Manganese (mg/kg)	Nickel (mg/kg)	Thorium (mg/kg)	Uranium (mg/kg)	Zinc (mg/kg)
EB@RB	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	93.0	10.0	<1.5	<0.1	<0.02	0.23	0.33	0.15	40	0.14	<0.1	<0.1	20
EB@RB	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	80.0	5.4	<1.5	<0.1	<0.02	0.27	0.37	0.13	27	0.13	<0.1	<0.1	23
EB@RB	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	80.0	5.4	<1.5	<0.1	<0.02	0.27	0.38	0.12	27	0.13	<0.1	<0.1	23
EB@RB	East Branch	22/05/2015	*Mogurnda mogurnda*	Hind Body	78.0	6.2	<1.5	<0.1	<0.02	0.41	0.46	0.2	23	0.2	<0.1	<0.1	22
EB@GS097	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	109.0	18.1	<1.5	<0.1	<0.02	0.12	0.3	0.29	23	<0.1	<0.1	<0.1	19
EB@GS097	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	103.0	16.0	<1.5	<0.1	<0.02	<0.1	0.26	<0.1	31	<0.1	<0.1	<0.1	19
EB@GS097	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	95.0	11.5	<1.5	<0.1	<0.02	0.16	0.24	0.25	17	<0.1	<0.1	<0.1	17
EB@GS097	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	118.0	23.6	<1.5	<0.1	<0.02	0.13	0.32	0.22	26	<0.1	<0.1	<0.1	20
EB@GS097	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	56.5	3.0	<1.5	<0.1	<0.02	<0.1	0.36	0.22	36	0.1	<0.1	<0.1	25
EBusHS	East Branch	25/05/2015	*Mogurnda mogurnda*	Hind Body	48.0	1.3	<1.5	<0.1	<0.02	0.22	0.46	<0.1	36	0.16	<0.1	<0.1	21
EBusHS	East Branch	25/05/2015	*Mogurnda mogurnda*	Hind Body	50.0	1.5	<1.5	<0.1	<0.02	0.41	0.89	<0.1	12	0.17	<0.1	<0.1	26
EBusHS	East Branch	25/05/2015	*Mogurnda mogurnda*	Hind Body	56.0	2.3	<1.5	<0.1	<0.02	0.26	0.51	0.2	20	0.11	<0.1	<0.1	18
EBusHS	East Branch	25/05/2015	*Mogurnda mogurnda*	Hind Body	62.0	2.8	<1.5	<0.1	<0.02	0.29	0.47	<0.1	43	0.12	<0.1	<0.1	16
EBusHS	East Branch	25/05/2015	*Mogurnda mogurnda*	Hind Body	62.0	2.8	<1.5	<0.1	<0.02	0.29	0.5	<0.1	43	0.14	<0.1	<0.1	16
EBusHS	East Branch	25/05/2015	*Mogurnda mogurnda*	Hind Body	52.0	2.0	<1.5	<0.1	<0.02	0.37	0.62	0.5	40	0.16	<0.1	<0.1	22
EBdsHS	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	94.0	11.2	<1.5	<0.1	<0.02	0.17	0.55	0.31	29	<0.1	<0.1	<0.1	15
EBdsHS	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	93.0	9.9	<1.5	<0.1	<0.02	0.16	0.44	1.1	58	0.11	<0.1	<0.1	17
EBdsHS	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	78.5	6.3	<1.5	<0.1	<0.02	0.21	0.31	0.13	13	<0.1	<0.1	<0.1	21
EBdsHS	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	77.0	5.5	<1.5	<0.1	<0.02	0.19	0.41	1.7	20	<0.1	<0.1	<0.1	16
EBdsHS	East Branch	23/05/2015	*Mogurnda mogurnda*	Hind Body	73.0	4.9	<1.5	<0.1	<0.02	0.17	0.51	1.5	26	<0.1	<0.1	<0.1	15
EBusFR	East Branch	26/05/2015	*Mogurnda mogurnda*	Hind Body	43.0	1.2	<1.5	<0.1	<0.02	0.16	0.31	0.25	65	0.12	<0.1	<0.1	23
EBusFR	East Branch	26/05/2015	*Mogurnda mogurnda*	Hind Body	69.0	4.8	<1.5	<0.1	<0.02	0.22	0.32	0.12	29	<0.1	<0.1	<0.1	21
EBusFR	East Branch	26/05/2015	*Mogurnda mogurnda*	Hind Body	84.0	7.9	<1.5	<0.1	<0.02	0.24	0.28	0.14	28	0.13	<0.1	<0.1	18
EBusFR	East Branch	26/05/2015	*Mogurnda mogurnda*	Hind Body	55.0	2.0	<1.5	<0.1	<0.02	0.47	0.36	0.53	63	0.17	<0.1	<0.1	17
EBusFR	East Branch	26/05/2015	*Mogurnda mogurnda*	Hind Body	55.0	2.0	<1.5	<0.1	<0.02	0.48	0.34	0.52	64	0.17	<0.1	<0.1	17
EBusFR	East Branch	26/05/2015	*Mogurnda mogurnda*	Hind Body	46.0	1.3	<1.5	<0.1	<0.02	0.19	0.3	0.23	31	<0.1	<0.1	<0.1	27
FR@GS204	D/S of East Branch	27/05/2015	*Mogurnda mogurnda*	Hind Body	72.0	4.1	<1.5	<0.1	<0.02	0.15	0.21	<0.1	18	<0.1	<0.1	<0.1	17
FR@GS204	D/S of East Branch	27/05/2015	*Mogurnda mogurnda*	Hind Body	72.0	3.7	<1.5	<0.1	<0.02	0.14	0.25	0.13	48	<0.1	<0.1	<0.1	28
FRusFC	D/S of East Branch	30/05/2015	*Mogurnda mogurnda*	Hind Body	76.0	5.6	<1.5	<0.1	<0.02	<0.1	0.21	0.14	24	<0.1	<0.1	<0.1	19
FRusFC	D/S of East Branch	30/05/2015	*Mogurnda mogurnda*	Hind Body	42.5	1.0	<1.5	<0.1	<0.02	<0.1	0.23	<0.1	14	<0.1	<0.1	<0.1	20
FRusFC	D/S of East Branch	30/05/2015	*Mogurnda mogurnda*	Hind Body	47.5	1.2	<1.5	<0.1	<0.02	<0.1	0.21	<0.1	12	<0.1	<0.1	<0.1	19
FRusFC	D/S of East Branch	30/05/2015	*Mogurnda mogurnda*	Hind Body	41.5	0.7	<1.5	<0.1	<0.02	0.14	0.27	<0.1	12	<0.1	<0.1	<0.1	15
FRusFC	D/S of East Branch	30/05/2015	*Mogurnda mogurnda*	Hind Body	44.5	0.9	<1.5	<0.1	<0.02	0.1	0.23	<0.1	16	<0.1	<0.1	<0.1	16
FRusMB	U/S of East Branch	20/05/2015	*Melanotaenia nigrans*	Whole Body	36.0	0.5	8.3	<0.1	<0.02	<0.1	5.4	<0.1	8.4	<0.1	<0.1	<0.1	47
EB@LB	U/S of East Branch	21/05/2015	*Melanotaenia nigrans*	Whole Body	26.5	0.1	2.3	0.14	<0.02	<0.1	1.4	<0.1	11	0.28	<0.1	<0.1	62
EB@LB	U/S of East Branch	21/05/2015	*Melanotaenia nigrans*	Whole Body	26.5	0.1	2.4	0.13	<0.02	<0.1	1.1	<0.1	11	0.22	<0.1	<0.1	62
FC@LB	U/S of East Branch	21/05/2015	*Melanotaenia nigrans*	Whole Body	40.0	0.7	1.6	<0.1	<0.02	<0.1	1	0.21	4.4	<0.1	<0.1	<0.1	50
FC@LB	U/S of East Branch	21/05/2015	*Melanotaenia nigrans*	Whole Body	29.0	0.2	1.8	<0.1	<0.02	<0.1	1.1	<0.1	5.1	<0.1	<0.1	<0.1	52
FC@LB	U/S of East Branch	21/05/2015	*Melanotaenia nigrans*	Whole Body	33.0	0.4	4.2	<0.1	<0.02	<0.1	1.6	0.2	9.2	<0.1	<0.1	<0.1	48
FC@LB	U/S of East Branch	21/05/2015	*Melanotaenia nigrans*	Whole Body	30.5	0.3	5	<0.1	<0.02	0.21	2.8	0.69	7.2	0.21	<0.1	<0.1	55
EB@GS200	East Branch	22/05/2015	*Melanotaenia nigrans*	Whole Body	25.5	0.1	5.5	0.12	<0.02	1.5	15	<0.1	22	1.1	<0.1	<0.5	110
EB@GS200	East Branch	22/05/2015	*Melanotaenia nigrans*	Whole Body	49.0	1.1	<1.5	<0.1	0.098	0.96	16	0.16	16	0.84	<0.1	<0.1	110
EB@GS200	East Branch	22/05/2015	*Melanotaenia nigrans*	Whole Body	39.5	0.7	<1.5	<0.1	0.022	0.74	3.5	<0.1	10	0.64	<0.1	<0.1	53
EB@GS327	East Branch	24/05/2015	*Melanotaenia nigrans*	Whole Body	41.0	0.6	2.1	<0.1	0.024	2	4.4	<0.1	60	0.53	<0.1	<0.2	45
EB@GS327	East Branch	24/05/2015	*Melanotaenia nigrans*	Whole Body	32.0	0.4	1.5	<0.1	<0.02	0.35	1.4	0.13	27	0.21	<0.1	<0.1	34
EB@GS327	East Branch	24/05/2015	*Melanotaenia nigrans*	Whole Body	28.0	0.2	<1.5	<0.1	<0.02	0.95	1.9	<0.1	27	0.45	<0.1	<0.1	57
EB@GS327	East Branch	24/05/2015	*Melanotaenia nigrans*	Whole Body	28.0	0.2	<1.5	<0.1	<0.02	0.98	1.8	<0.1	27	0.45	<0.1	<0.1	57
EB@RB	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	39.0	0.6	1.8	<0.1	<0.02	0.37	1.5	<0.1	26	0.2	<0.1	<0.1	44
EB@RB	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	38.0	0.5	<1.5	<0.1	0.03	0.32	3	<0.1	22	0.17	<0.1	<0.1	57
EB@RB	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	56.0	1.7	<1.5	<0.1	0.031	0.28	3	<0.1	19	0.11	<0.1	<0.1	61
EB@RB	East Branch	22/05/2015	*Melanotaenia nigrans*	Whole Body	39.0	0.6	43	0.14	0.032	7.7	5.8	0.59	110	2	<0.1	<0.2	42
EB@RB	East Branch	22/05/2015	*Melanotaenia nigrans*	Whole Body	36.0	0.5	8.5	0.11	0.029	0.8	4.1	0.57	27	0.37	<0.1	<0.1	51
EB@GS097	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	36.5	0.6	<1.5	<0.1	<0.02	0.2	1.5	<0.1	11	0.14	<0.1	<0.1	44
EB@GS097	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	34.0	0.5	<1.5	<0.1	<0.02	0.3	4.9	<0.1	36	0.17	<0.1	<0.1	49
EB@GS097	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	33.0	0.4	<1.5	<0.1	<0.02	0.23	1.2	<0.1	11	0.16	<0.1	<0.1	48
EB@GS097	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	32.0	0.4	<1.5	<0.1	<0.02	0.24	1.8	<0.1	12	0.14	<0.1	<0.1	47
EBusHS	East Branch	25/05/2015	*Melanotaenia nigrans*	Whole Body	41.0	0.7	3.9	<0.1	<0.02	1.4	1.8	0.13	43	0.28	<0.1	<0.1	34
EBusHS	East Branch	25/05/2015	*Melanotaenia nigrans*	Whole Body	41.0	0.7	3.9	<0.1	<0.02	1.4	1.8	0.12	43	0.3	<0.1	<0.1	34
EBusHS	East Branch	25/05/2015	*Melanotaenia nigrans*	Whole Body	37.0	0.5	<1.5	<0.1	<0.02	0.82	2.1	<0.1	62	0.24	<0.1	<0.2	48
EBusHS	East Branch	25/05/2015	*Melanotaenia nigrans*	Whole Body	37.0	0.6	3.2	0.4	0.024	2.1	1.8	<0.1	51	0.3	<0.1	<0.3	47
EBusHS	East Branch	25/05/2015	*Melanotaenia nigrans*	Whole Body	36.0	0.5	5.6	0.48	0.032	2.1	2.6	0.32	38	0.31	<0.1	<0.3	50
EBusHS	East Branch	25/05/2015	*Melanotaenia nigrans*	Whole Body	37.0	0.5	<1.5	<0.1	<0.02	0.5	1.5	0.27	17	0.19	<0.1	<0.1	47
EBdsHS	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	34.0	0.5	2.4	<0.1	<0.02	0.3	2.1	<0.1	25	0.18	<0.1	<0.1	45
EBdsHS	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	53.5	1.6	<1.5	<0.1	<0.02	0.28	2.8	0.31	12	0.13	<0.1	<0.1	53
EBdsHS	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	36.5	0.5	<1.5	<0.1	<0.02	0.35	1.3	<0.1	27	0.16	<0.1	<0.1	51
EBdsHS	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	35.0	0.4	2.4	<0.1	<0.02	0.34	2	<0.1	17	0.16	<0.1	<0.1	49
EBdsHS	East Branch	23/05/2015	*Melanotaenia nigrans*	Whole Body	36.0	0.5	1.6	<0.1	<0.02	0.55	2.3	<0.1	21	0.2	<0.1	<0.1	47
FR@GS204	D/S of East Branch	27/05/2015	*Melanotaenia nigrans*	Whole Body	34.0	0.3	<1.5	<0.1	<0.02	<0.1	0.7	<0.1	5.1	<0.1	<0.1	<0.1	47
FR@GS204	D/S of East Branch	27/05/2015	*Melanotaenia nigrans*	Whole Body	34.0	0.3	<1.5	<0.1	<0.02	<0.1	0.72	<0.1	5.2	<0.1	<0.1	<0.1	48
FR@GS204	D/S of East Branch	27/05/2015	*Melanotaenia nigrans*	Whole Body	29.0	0.1	2.9	<0.1	<0.02	0.2	1.9	<0.1	6.3	0.24	<0.1	<0.1	65
FR@GS204	D/S of East Branch	27/05/2015	*Melanotaenia nigrans*	Whole Body	30.5	0.2	<1.5	0.11	<0.02	0.17	1.2	<0.1	16	<0.1	<0.1	<0.1	69
FRusFC	D/S of East Branch	30/05/2015	*Melanotaenia nigrans*	Whole Body	31.0	0.3	<1.5	<0.1	<0.02	0.13	0.65	<0.1	7.6	0.14	<0.1	<0.1	67
FRusFC	D/S of East Branch	30/05/2015	*Melanotaenia nigrans*	Whole Body	29.0	0.3	<1.5	0.1	<0.02	<0.1	0.64	<0.1	8.9	<0.1	<0.1	<0.1	59
FRusFC	D/S of East Branch	30/05/2015	*Melanotaenia nigrans*	Whole Body	38.0	0.6	2.9	<0.1	<0.02	0.11	0.64	<0.1	8.8	<0.1	<0.1	<0.1	50
FRusFC	D/S of East Branch	30/05/2015	*Melanotaenia nigrans*	Whole Body	34.0	0.4	<1.5	<0.1	<0.02	<0.1	0.68	<0.1	5.3	<0.1	<0.1	<0.1	71
FRusFC	D/S of East Branch	30/05/2015	*Melanotaenia nigrans*	Whole Body	26.0	0.2	5.4	0.14	<0.02	0.42	2.3	<0.1	47	0.21	<0.1	<0.1	47

APPENDIX 5 2015 FISH DATA

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
EB@GS097	23-May-15	EL	1	481	13	Melanotaenia splendida inornata	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	310	Macrobrachium bullatum	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	54	Mogurnda mogurnda	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	5	Melanotaenia nigrans	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	3	Oxyeleotris selhemi	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	7	Neosilurus ater	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	1	Glossamia aprion	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	3	Leiopotherapon unicolor	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	1	Ambassis macleayi	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	EL	1	481	1	Neosilurus hyrtlii	On-time 481 sec (DC: 15, V: 250, Freq: 25).
EB@GS097	23-May-15	LFYK	1	1	12	Neosilurus ater	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	2	Melanotaenia nigrans	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	81	Ambassis macleayi	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	11	Glossamia aprion	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	1	Craterocephalus stercusmuscarum	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	3	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	3	Oxyeleotris selhemi	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	6	Neosilurus hyrtlii	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	1	1	1	Leiopotherapon unicolor	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	2	1	8	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	2	1	19	Ambassis macleayi	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	2	1	2	Oxyeleotris selhemi	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	2	1	1	Glossamia aprion	Set from dawn to dusk.
EB@GS097	23-May-15	LFYK	2	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS097	23-May-15	CL	1	1	0		Set from dawn to dusk. NO CATCH.
EB@GS097	23-May-15	CL	2	1	0		Set from dawn to dusk. NO CATCH.
EB@GS097	23-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
EB@GS097	23-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
EB@GS097	23-May-15	CL	5	1	0		Set from dawn to dusk. NO CATCH.
EB@GS097	23-May-15	VIS	1	1	0	Megalops cyprinoides	
EB@GS200	22-May-15	EL	1	546	2	Mogurnda mogurnda	On-time 546 sec (Dc: 5 to 3 pulse grated, V: 200 + 250, Freq: 15 + 25).
EB@GS200	22-May-15	EL	1	546	1	Melanotaenia nigrans	On-time 546 sec (Dc: 5 to 3 pulse grated, V: 200 + 250, Freq: 15 + 25).
EB@GS200	22-May-15	EL	1	546	14	Macrobrachium bullatum	On-time 546 sec (Dc: 5 to 3 pulse grated, V: 200 + 250, Freq: 15 + 25).
EB@GS200	22-May-15	EL	1	546	2	Melanotaenia splendida inornata	On-time 546 sec (Dc: 5 to 3 pulse grated, V: 200 + 250, Freq: 15 + 25).
EB@GS200	22-May-15	LFYK	1	1	14	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	1	1	50	Melanotaenia nigrans	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	1	1	26	Mogurnda mogurnda	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	1	1	113	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	2	1	46	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	2	1	117	Melanotaenia nigrans	Set from dawn to dusk.

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EB@GS200	22-May-15	LFYK	2	1	7	Mogurnda mogurnda	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	2	1	8	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@GS200	22-May-15	LFYK	2	1	1	Ambassis macleayi	Set from dawn to dusk.
EB@GS200	22-May-15	CL	1	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS200	22-May-15	CL	2	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS200	22-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
EB@GS200	22-May-15	CL	4	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS200	22-May-15	CL	5	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS327	24-May-15	EL	1	425	321	Macrobrachium bullatum	On-time 425 sec (Dc: 15, V: 250, Freq: 25).
EB@GS327	24-May-15	EL	1	425	34	Mogurnda mogurnda	On-time 425 sec (Dc: 15, V: 250, Freq: 25).
EB@GS327	24-May-15	EL	1	425	6	Melanotaenia nigrans	On-time 425 sec (Dc: 15, V: 250, Freq: 25).
EB@GS327	24-May-15	EL	1	425	2	Melanotaenia splendida inornata	On-time 425 sec (Dc: 15, V: 250, Freq: 25).
EB@GS327	24-May-15	1	1	4	3	Megalops cyprinoides	Set 4:30-8:30pm.
EB@GS327	24-May-15	1	1	4	43	Melanotaenia splendida inornata	Set 4:30-8:30pm.
EB@GS327	24-May-15	1	1	4	2	Leiopotherapon unicolor	Set 4:30-8:30pm.
EB@GS327	24-May-15	1	1	4	10	Neosilurus hyrtlii	Set 4:30-8:30pm.
EB@GS327	24-May-15	1	1	4	3	Neosilurus ater	Set 4:30-8:30pm.
EB@GS327	24-May-15	1.5	1	4	6	Melanotaenia splendida inornata	Set 4:30-8:30pm.
EB@GS327	24-May-15	1.5	1	4	13	Neosilurus hyrtlii	Set 4:30-8:30pm.
EB@GS327	24-May-15	1.5	1	4	2	Neosilurus ater	Set 4:30-8:30pm.
EB@GS327	24-May-15	1.5	1	4	26	Megalops cyprinoides	Set 4:30-8:30pm.
EB@GS327	24-May-15	1.5	1	4	10	Leiopotherapon unicolor	Set 4:30-8:30pm.
EB@GS327	24-May-15	1.5	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
EB@GS327	24-May-15	2L(A)	1	4	1	Oxyeleotris selhemi	Set 4:30-8:30pm.
EB@GS327	24-May-15	2L(A)	1	4	2	Neosilurus hyrtlii	Set 4:30-8:30pm.
EB@GS327	24-May-15	3L(A)	1	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
EB@GS327	24-May-15	PN(A)	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
EB@GS327	24-May-15	LFYK	1	1	3	Oxyeleotris selhemi	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	1	1	32	Ambassis macleayi	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	1	1	2	Neosilurus ater	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	1	1	5	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	1	1	56	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	1	1	16	Mogurnda mogurnda	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	2	1	3	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS327	24-May-15	LFYK	2	1	2	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@GS327	24-May-15	CL	1	1	0		Set from dawn to dusk. NO CATCH.
EB@GS327	24-May-15	CL	2	1	0		Set from dawn to dusk. NO CATCH.
EB@GS327	24-May-15	CL	3	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS327	24-May-15	CL	4	1	2	Macrobrachium bullatum	Set from dawn to dusk.
EB@GS327	24-May-15	CL	5	1	0		Set from dawn to dusk. NO CATCH.
EB@LB	21-May-15	EL	1	356	20	Mogurnda mogurnda	On-time 356 sec (Dc: 35, V: 300, Freq: 15).
EB@LB	21-May-15	EL	1	356	2	Austrothelphusa transversa	On-time 356 sec (Dc: 35, V: 300, Freq: 15).
EB@LB	21-May-15	SFYK	1	1	1	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	1	1	113	Mogurnda mogurnda	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	1	1	4	Austrothelphusa transversa	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	1	1	1	Melanotaenia nigrans	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	1	1	3	Macrobrachium bullatum	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	2	1	4	Austrothelphusa transversa	Set from dawn to dusk.

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EB@LB	21-May-15	SFYK	2	1	5	Melanotaenia splendida inornata	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	2	1	3	Mogurnda mogurnda	Set from dawn to dusk.
EB@LB	21-May-15	SFYK	2	1	3	Macrobrachium bullatum	Set from dawn to dusk.
EB@LB	21-May-15	CL	1	1	0		Set from dawn to dusk. NO CATCH.
EB@LB	21-May-15	CL	2	1	0		Set from dawn to dusk. NO CATCH.
EB@LB	21-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
EB@LB	21-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
EB@LB	21-May-15	CL	5	1	0		Set from dawn to dusk. NO CATCH.
EB@LB	21-May-15	VIS	1	1	0		Hydrilla-like macrophyte present.
EBDSHS	23-May-15	LFYK	1	1	2	Chelodina rugosa	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	3	Chelodina rugosa	Set from dawn to dusk.
EBDSHS	23-May-15	EL	1	478	277	Macrobrachium bullatum	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	10	Melanotaenia splendida inornata	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	55	Mogurnda mogurnda	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	7	Melanotaenia nigrans	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	1	Leiopotherapon unicolor	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	2	Ophisternon gutturale	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	2	Neosilurus hyrtlii	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	6	Neosilurus ater	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	EL	1	478	1	Oxyeleotris selhemi	On-time 478 sec (Dc: 15, V: 250, Freq: 25).
EBDSHS	23-May-15	LFYK	1	1	1	Cherax quadricarinatus	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	8	Ambassis macleayi	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	1	Melanotaenia splendida inornata	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	5	Neosilurus hyrtlii	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	2	Glossamia aprion	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	1	Porochilus rendahli	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	7	Neosilurus ater	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	1	Mogurnda mogurnda	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	1	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	28	Melanotaenia nigrans	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	15	Ambassis macleayi	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	18	Melanotaenia splendida inornata	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	1	Megalops cyprinoides	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	1	Neosilurus hyrtlii	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	3	Macrobrachium bullatum	Set from dawn to dusk.
EBDSHS	23-May-15	LFYK	2	1	1	Neosilurus ater	Set from dawn to dusk.
EBDSHS	23-May-15	CL	1	1	1	Macrobrachium bullatum	Set from dawn to dusk.
EBDSHS	23-May-15	CL	2	1	0		Set from dawn to dusk. NO CATCH.
EBDSHS	23-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
EBDSHS	23-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
EBDSHS	23-May-15	CL	5	1	0		Set from dawn to dusk. NO CATCH.
EBDSRB	22-May-15	EL	1	363	26	Mogurnda mogurnda	On-time 363 sec (Dc: 15, V: 250, Freq: 25).
EBDSRB	22-May-15	EL	1	363	10	Melanotaenia nigrans	On-time 363 sec (Dc: 15, V: 250, Freq: 25).
EBDSRB	22-May-15	EL	1	363	157	Macrobrachium bullatum	On-time 363 sec (Dc: 15, V: 250, Freq: 25).
EBDSRB	22-May-15	EL	1	363	1	Melanotaenia splendida inornata	On-time 363 sec (Dc: 15, V: 250, Freq: 25).
EBDSRB	22-May-15	EL	1	363	2	Cherax quadricarinatus	On-time 363 sec (Dc: 15, V: 250, Freq: 25).
EBDSRB	22-May-15	EL	1	363	5	Neosilurus hyrtlii	On-time 363 sec (Dc: 15, V: 250, Freq: 25).
EBDSRB	22-May-15	LFYK	1	1	5	Megalops cyprinoides	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	1	1	6	Melanotaenia splendida inornata	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	1	1	3	Melanotaenia nigrans	Set from dusk to dawn.

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EBDSRB	22-May-15	LFYK	1	1	2	Macrobrachium bullatum	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	1	Megalops cyprinoides	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	15	Melanotaenia splendida inornata	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	22	Ambassis macleayi	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	1	Glossamia aprion	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	3	Melanotaenia nigrans	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	6	Macrobrachium bullatum	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	5	Mogurnda mogurnda	Set from dusk to dawn.
EBDSRB	22-May-15	LFYK	2	1	1	Neosilurus hyrtlii	Set from dusk to dawn.
EBDSRB	22-May-15	CL	1	1	1	Macrobrachium bullatum	Set from dusk to dawn.
EBDSRB	22-May-15	CL	2	1	2	Macrobrachium bullatum	Set from dusk to dawn.
EBDSRB	22-May-15	CL	2	1	1	Mogurnda mogurnda	Set from dusk to dawn.
EBDSRB	22-May-15	CL	3	1	1	Macrobrachium bullatum	Set from dusk to dawn.
EBDSRB	22-May-15	CL	4	1	2	Macrobrachium bullatum	Set from dusk to dawn.
EBDSRB	22-May-15	CL	5	1	0		Set from dusk to dawn. NO CATCH.
EBUSFR	26-May-15	VIS	1	1	1	Crocodylus johnsoni	
EBUSFR	26-May-15	EL	1	558	5	Melanotaenia splendida inornata	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	EL	1	558	410	Macrobrachium bullatum	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	EL	1	558	47	Mogurnda mogurnda	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	EL	1	558	5	Leiopotherapon unicolor	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	EL	1	558	1	Cherax quadricarinatus	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	EL	1	558	1	Neosilurus hyrtlii	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	EL	1	558	1	Glossogobius species 2.	On-time 558 sec (Dc: 15, V: 250, Freq: 25).
EBUSFR	26-May-15	1	1	4	1	Lates calcarifer	Set 4:30-8:30pm.
EBUSFR	26-May-15	1	1	4	5	Neosilurus hyrtlii	Set 4:30-8:30pm.
EBUSFR	26-May-15	1	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
EBUSFR	26-May-15	1	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
EBUSFR	26-May-15	1	1	4	7	Melanotaenia splendida inornata	Set 4:30-8:30pm.
EBUSFR	26-May-15	1	1	4	1	Strongylura krefftii	Set 4:30-8:30pm.
EBUSFR	26-May-15	1	1	4	2	Leiopotherapon unicolor	Set 4:30-8:30pm.
EBUSFR	26-May-15	1.5	1	4	17	Nematalosa erebi	Set 4:30-8:30pm.
EBUSFR	26-May-15	1.5	1	4	22	Megalops cyprinoides	Set 4:30-8:30pm.
EBUSFR	26-May-15	1.5	1	4	6	Neosilurus hyrtlii	Set 4:30-8:30pm.
EBUSFR	26-May-15	1.5	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
EBUSFR	26-May-15	1.5	1	4	2	Leiopotherapon unicolor	Set 4:30-8:30pm.
EBUSFR	26-May-15	1.5	1	4	1	Glossamia aprion	Set 4:30-8:30pm.
EBUSFR	26-May-15	2L(A)	1	4	3	Neosilurus hyrtlii	Set 4:30-8:30pm.
EBUSFR	26-May-15	2L(A)	1	4	14	Nematalosa erebi	Set 4:30-8:30pm.
EBUSFR	26-May-15	2L(A)	1	4	1	Glossamia aprion	Set 4:30-8:30pm.
EBUSFR	26-May-15	3L(A)	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
EBUSFR	26-May-15	3L(A)	1	4	1	Nematalosa erebi	Set 4:30-8:30pm.
EBUSFR	26-May-15	PN(A)	1	4	0		Set 4:30-8:30pm. NO CATCH.
EBUSFR	26-May-15	LFYK	1	1	1	Melanotaenia nigrans	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	11	Melanotaenia splendida inornata	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	10	Ambassis macleayi	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	115	Macrobrachium bullatum	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	4	Mogurnda mogurnda	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	1	Neosilurus ater	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	2	Oxyeleotris selhemi	Set from dawn to dusk.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
EBUSFR	26-May-15	LFYK	1	1	1	Glossogobius species 2.	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	2	Neosilurus hyrtlii	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	2	Leiopotherapon unicolor	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	1	1	2	Cherax quadricarinatus	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	5	Mogurnda mogurnda	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	6	Melanotaenia splendida inornata	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	304	Macrobrachium bullatum	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	3	Leiopotherapon unicolor	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	3	Ambassis macleayi	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	3	Glossogobius species 2.	Set from dawn to dusk.
EBUSFR	26-May-15	LFYK	2	1	6	Neosilurus hyrtlii	Set from dawn to dusk.
EBUSFR	26-May-15	CL	1	1	2	Macrobrachium bullatum	Set from dawn to dusk.
EBUSFR	26-May-15	CL	2	1	2	Macrobrachium bullatum	Set from dawn to dusk.
EBUSFR	26-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
EBUSFR	26-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
EBUSFR	26-May-15	CL	5	1	0		Set from dawn to dusk. NO CATCH.
EBUSHS	25-May-15	1.5	1	4	1	Crocodylus johnsoni	Set 4:30-8:30pm.
EBUSHS	25-May-15	EL	1	403	21	Melanotaenia splendida inornata	On-time 403 sec (Dc: 15, V: 250, Freq: 25).
EBUSHS	25-May-15	EL	1	403	44	Melanotaenia nigrans	On-time 403 sec (Dc: 15, V: 250, Freq: 25).
EBUSHS	25-May-15	EL	1	403	72	Mogurnda mogurnda	On-time 403 sec (Dc: 15, V: 250, Freq: 25).
EBUSHS	25-May-15	EL	1	403	170	Macrobrachium bullatum	On-time 403 sec (Dc: 15, V: 250, Freq: 25).
EBUSHS	25-May-15	EL	1	403	3	Ambassis macleayi	On-time 403 sec (Dc: 15, V: 250, Freq: 25).
EBUSHS	25-May-15	EL	1	403	1	Neosilurus hyrtlii	On-time 403 sec (Dc: 15, V: 250, Freq: 25).
EBUSHS	25-May-15	1	1	4	6	Neosilurus hyrtlii	Set 4:30-8:30pm.
EBUSHS	25-May-15	1	1	4	3	Melanotaenia splendida inornata	Set 4:30-8:30pm.
EBUSHS	25-May-15	1	1	4	2	Neosilurus ater	Set 4:30-8:30pm.
EBUSHS	25-May-15	1	1	4	1	Glossogobius species 2.	Set 4:30-8:30pm.
EBUSHS	25-May-15	1.5	1	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
EBUSHS	25-May-15	1.5	1	4	1	Oxyeleotris selhemi	Set 4:30-8:30pm.
EBUSHS	25-May-15	1.5	1	4	1	Glossamia aprion	Set 4:30-8:30pm.
EBUSHS	25-May-15	1.5	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
EBUSHS	25-May-15	1.5	1	4	3	Neosilurus hyrtlii	Set 4:30-8:30pm.
EBUSHS	25-May-15	2L(A)	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
EBUSHS	25-May-15	2L(A)	1	4	1	Glossamia aprion	Set 4:30-8:30pm.
EBUSHS	25-May-15	LFYK	1	1	12	Ambassis macleayi	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	1	1	2	Melanotaenia splendida inornata	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	1	1	16	Macrobrachium bullatum	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	1	1	1	Neosilurus hyrtlii	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	2	1	42	Ambassis macleayi	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	2	1	6	Melanotaenia splendida inornata	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	2	1	1	Macrobrachium bullatum	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	2	1	1	Mogurnda mogurnda	Set from dusk to dawn.
EBUSHS	25-May-15	LFYK	2	1	3	Neosilurus hyrtlii	Set from dusk to dawn.
EBUSHS	25-May-15	CL	1	1	2	Macrobrachium bullatum	Set from dusk to dawn.
EBUSHS	25-May-15	CL	2	1	1	Macrobrachium bullatum	Set from dusk to dawn.
EBUSHS	25-May-15	CL	2	1	1	Austrothelphusa transversa	Set from dusk to dawn.
EBUSHS	25-May-15	CL	3	1	1	Macrobrachium bullatum	Set from dusk to dawn.
EBUSHS	25-May-15	CL	4	1	2	Macrobrachium bullatum	Set from dusk to dawn.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
EBUSHS	25-May-15	CL	5	1	3	Macrobrachium bullatum	Set from dusk to dawn.
FC@LB	21-May-15	EL	1	450	6	Mogurnda mogurnda	On-time 450 sec (Dc: 35, V:350, Freq: 15).
FC@LB	21-May-15	EL	1	450	26	Macrobrachium bullatum	On-time 450 sec (Dc: 35, V:350, Freq: 15).
FC@LB	21-May-15	EL	1	450	4	Melanotaenia splendida inornata	On-time 450 sec (Dc: 35, V:350, Freq: 15).
FC@LB	21-May-15	EL	1	450	3	Melanotaenia nigrans	On-time 450 sec (Dc: 35, V:350, Freq: 15).
FC@LB	21-May-15	SFYK	1	1	1	Austrothelphusa transversa	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	1	1	71	Melanotaenia nigrans	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	1	1	62	Melanotaenia splendida inornata	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	1	1	12	Ambassis macleayi	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	1	1	31	Macrobrachium bullatum	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	1	1	27	Mogurnda mogurnda	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	2	1	22	Melanotaenia splendida inornata	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	2	1	8	Macrobrachium bullatum	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	2	1	60	Melanotaenia nigrans	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	2	1	25	Mogurnda mogurnda	Set from dusk to dawn.
FC@LB	21-May-15	SFYK	2	1	13	Austrothelphusa transversa	Set from dusk to dawn.
FC@LB	21-May-15	CL	1	1	1	Austrothelphusa transversa	Set from dusk to dawn.
FC@LB	21-May-15	CL	2	1	2	Austrothelphusa transversa	Set from dusk to dawn.
FC@LB	21-May-15	CL	2	1	6	Melanotaenia nigrans	Set from dusk to dawn.
FC@LB	21-May-15	CL	2	1	1	Melanotaenia splendida inornata	Set from dusk to dawn.
FC@LB	21-May-15	CL	3	1	0		Set from dusk to dawn. NO CATCH.
FC@LB	21-May-15	CL	4	1	4	Austrothelphusa transversa	Set from dusk to dawn.
FC@LB	21-May-15	CL	5	1	4	Austrothelphusa transversa	Set from dusk to dawn.
FR@GS204	27-May-15	VIS	1	1	1	Crocodylus porosus	
FR@GS204	27-May-15	3L(A)	1	4	1	Crocodylus johnsoni	Set 4:30-8:30pm.
FR@GS204	27-May-15	EL	1	524	172	Caridina gracilirostris	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	96	Macrobrachium bullatum	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	48	Caridina typus	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	3	Melanotaenia nigrans	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	1	Craterocephalus stramineus	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	4	Melanotaenia splendida inornata	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	135	Macrobrachium handschini	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	3	Macrobrachium spinipes	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	1	Neosilurus hyrtlii	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	9	Glossogobius species 2.	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	3	Oxyeleotris selhemi	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	1	Neosilurus ater	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	EL	1	524	3	Mogurnda mogurnda	On-time 524 sec (Dc: 15, V: 250, Freq: 25).
FR@GS204	27-May-15	1	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
FR@GS204	27-May-15	1	1	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FR@GS204	27-May-15	1	1	4	2	Strongylura krefftii	Set 4:30-8:30pm.
FR@GS204	27-May-15	1	1	4	19	Amniataba percoides	Set 4:30-8:30pm.
FR@GS204	27-May-15	1	1	4	2	Nematalosa erebi	Set 4:30-8:30pm.
FR@GS204	27-May-15	1	1	4	3	Ambassis macleayi	Set 4:30-8:30pm.
FR@GS204	27-May-15	1.5	1	4	16	Nematalosa erebi	Set 4:30-8:30pm.
FR@GS204	27-May-15	1.5	1	4	4	Toxotes chatareus	Set 4:30-8:30pm.
FR@GS204	27-May-15	1.5	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FR@GS204	27-May-15	1.5	1	4	2	Syncomistes butleri	Set 4:30-8:30pm.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FR@GS204	27-May-15	1.5	1	4	1	Amniataba percoides	Set 4:30-8:30pm.
FR@GS204	27-May-15	2L(A)	1	4	3	Nematalosa erebi	Set 4:30-8:30pm.
FR@GS204	27-May-15	2L(A)	1	4	5	Neosilurus ater	Set 4:30-8:30pm.
FR@GS204	27-May-15	2L(A)	1	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FR@GS204	27-May-15	2L(A)	1	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FR@GS204	27-May-15	3L(A)	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
FR@GS204	27-May-15	3L(A)	1	4	1	Nematalosa erebi	Set 4:30-8:30pm.
FR@GS204	27-May-15	3L(A)	1	4	3	Syncomistes butleri	Set 4:30-8:30pm.
FR@GS204	27-May-15	PN(A)	1	4	0		Set 4:30-8:30pm. NO CATCH.
FR@GS204	27-May-15	LFYK	1	1	37	Craterocephalus stramineus	Set from dusk to dawn.
FR@GS204	27-May-15	LFYK	1	1	1	Lates calcarifer	Set from dusk to dawn.
FR@GS204	27-May-15	LFYK	1	1	2	Macrobrachium spinipes	Set from dusk to dawn.
FR@GS204	27-May-15	LFYK	2	1	4	Craterocephalus stramineus	Set from dusk to dawn.
FR@GS204	27-May-15	CL	1	1	1	Macrobrachium bullatum	Set from dusk to dawn.
FR@GS204	27-May-15	CL	2	1	0		Set from dusk to dawn. NO CATCH.
FR@GS204	27-May-15	CL	3	1	0		Set from dusk to dawn. NO CATCH.
FR@GS204	27-May-15	CL	4	1	0		Set from dusk to dawn. NO CATCH.
FR@GS204	27-May-15	CL	5	1	1	Macrobrachium bullatum	Set from dusk to dawn.
FR@GS204	27-May-15	VIS	1	1	1	Oxyeleotris selhemi	
FR@GS204	27-May-15	LFYK	2	1	1	Crocodylus johnsoni	Set from dusk to dawn.
FR3	28-May-15	1.5	1	4	1	Crocodylus johnsoni	Set 4:30-8:30pm.
FR3	28-May-15	LFYK	1	1	1	Crocodylus johnsoni	Set from dawn to dusk.
FR3	28-May-15	1	1	4	1	Amniataba percoides	Set 4:30-8:30pm.
FR3	28-May-15	1	2	4	2	Amniataba percoides	Set 4:30-8:30pm.
FR3	28-May-15	1	2	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FR3	28-May-15	1	2	4	1	Strongylura krefftii	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	2	Strongylura krefftii	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	25	Nematalosa erebi	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	5	Toxotes chatareus	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	1	Neosilurus hyrtlii	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	3	Megalops cyprinoides	Set 4:30-8:30pm.
FR3	28-May-15	1.5	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
FR3	28-May-15	1.5	2	4	16	Amniataba percoides	Set 4:30-8:30pm.
FR3	28-May-15	1.5	2	4	7	Neosilurus ater	Set 4:30-8:30pm.
FR3	28-May-15	1.5	2	4	3	Toxotes chatareus	Set 4:30-8:30pm.
FR3	28-May-15	1.5	2	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FR3	28-May-15	1.5	2	4	1	Hephaestus fuliginosus	Set 4:30-8:30pm.
FR3	28-May-15	1.5	2	4	1	Glossamia aprion	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	1	4	1	Neosilurus hyrtlii	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	1	4	20	Nematalosa erebi	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	2	4	20	Nematalosa erebi	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	2	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FR3	28-May-15	2L(A)	2	4	2	Neosilurus ater	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	1	4	16	Nematalosa erebi	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	1	4	1	Arius graeffei	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	1	4	7	Neosilurus ater	Set 4:30-8:30pm.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FR3	28-May-15	3L(A)	1	4	2	Toxotes chatareus	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	1	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	2	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	2	4	1	Lates calcarifer	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	2	4	7	Neosilurus ater	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	2	4	1	Nematalosa erebi	Set 4:30-8:30pm.
FR3	28-May-15	3L(A)	2	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
FR3	28-May-15	PN(A)	1	4	3	Nematalosa erebi	Set 4:30-8:30pm.
FR3	28-May-15	PN(A)	2	4	0		Set 4:30-8:30pm. NO CATCH.
FR3	28-May-15	EL	1	378	6	Mogurnda mogurnda	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	109	Caridina gracilirostris	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	30	Macrobrachium handschini	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	1	Melanotaenia splendida inornata	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	148	Macrobrachium bullatum	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	12	Caridina typus	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	3	Macrobrachium spinipes	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	3	Hephaestus fuliginosus	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	EL	1	378	5	Glossogobius species 2.	On-time 378 sec (Dc: 15, V: 250, Freq: 25).
FR3	28-May-15	LFYK	1	1	1	Strongylura krefftii	Set from dawn to dusk.
FR3	28-May-15	LFYK	1	1	1	Ambassis macleayi	Set from dawn to dusk.
FR3	28-May-15	LFYK	1	1	1	Macrobrachium spinipes	Set from dawn to dusk.
FR3	28-May-15	LFYK	1	1	1	Macrobrachium handschini	Set from dawn to dusk.
FR3	28-May-15	LFYK	1	1	13	Craterocephalus stramineus	Set from dawn to dusk.
FR3	28-May-15	LFYK	2	1	0		Set from dawn to dusk. NO CATCH. Water level dropped overnight so fyke was no longer underwater.
FR3	28-May-15	CL	1	1	1	Glossamia aprion	Set from dawn to dusk.
FR3	28-May-15	CL	2	1	1	Macrobrachium handschini	Set from dawn to dusk.
FR3	28-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
FR3	28-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
FR3	28-May-15	CL	5	1	1	Cherax quadricarinatus	Set from dawn to dusk.
FRDSFC	29-May-15	VIS	1	1	1	Crocodylus porosus	
FRDSFC	29-May-15	EL	1	198	109	Macrobrachium bullatum	On-time 198 sec (Dc:15, V: 250, Freq: 25).
FRDSFC	29-May-15	EL	1	198	8	Caridina gracilirostris	On-time 198 sec (Dc:15, V: 250, Freq: 25).
FRDSFC	29-May-15	EL	1	198	3	Glossogobius species 2.	On-time 198 sec (Dc:15, V: 250, Freq: 25).
FRDSFC	29-May-15	EL	1	198	23	Macrobrachium handschini	On-time 198 sec (Dc:15, V: 250, Freq: 25).
FRDSFC	29-May-15	EL	1	198	1	Caridina typus	On-time 198 sec (Dc:15, V: 250, Freq: 25).
FRDSFC	29-May-15	1	1	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	1	4	3	Toxotes chatareus	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	2	4	2	Strongylura krefftii	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	2	4	18	Amniataba percoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	2	4	2	Neosilurus ater	Set 4:30-8:30pm.
FRDSFC	29-May-15	1	2	4	2	Hephaestus fuliginosus	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	1	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	2	Leiopotherapon unicolor	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	4	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	1	4	1	Melanotaenia splendida inornata	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	2	4	1	Pingalla sp. A	Set 4:30-8:30pm.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FRDSFC	29-May-15	1.5	2	4	6	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	2	4	1	Neosilurus ater	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	2	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	2	4	1	Leiopotherapon unicolor	Set 4:30-8:30pm.
FRDSFC	29-May-15	1.5	2	4	2	Toxotes chatareus	Set 4:30-8:30pm.
FRDSFC	29-May-15	2L(A)	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
FRDSFC	29-May-15	2L(A)	1	4	9	Nematalosa erebi	Set 4:30-8:30pm.
FRDSFC	29-May-15	2L(A)	2	4	1	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRDSFC	29-May-15	2L(A)	2	4	2	Nematalosa erebi	Set 4:30-8:30pm.
FRDSFC	29-May-15	2L(A)	2	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	1	4	14	Nematalosa erebi	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	1	4	4	Syncomistes butleri	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	1	4	2	Neosilurus ater	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	2	4	5	Neosilurus ater	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	2	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FRDSFC	29-May-15	3L(A)	2	4	1	Nematalosa erebi	Set 4:30-8:30pm.
FRDSFC	29-May-15	PN(A)	1	4	0		Set 4:30-8:30pm. NO CATCH.
FRDSFC	29-May-15	PN(A)	2	4	0		Set 4:30-8:30pm. NO CATCH.
FRDSFC	29-May-15	LFYK	1	1	0		Not Set.
FRDSFC	29-May-15	LFYK	2	1	0		Not set.
FRDSFC	29-May-15	CL	1	1	2	Macrobrachium bullatum	Set from dusk to dawn.
FRDSFC	29-May-15	CL	2	1	0		Set from dusk to dawn. NO CATCH.
FRDSFC	29-May-15	CL	3	1	0		Set from dusk to dawn. NO CATCH.
FRDSFC	29-May-15	CL	4	1	0		Set from dusk to dawn. NO CATCH.
FRDSFC	29-May-15	CL	5	1	0		Set from dusk to dawn. NO CATCH.
FRDSMB	19-May-15	EL	1	328	1	Amniataba percoides	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	2	Glossamia aprion	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	79	Macrobrachium bullatum	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	3	Macrobrachium spinipes	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	8	Macrobrachium handschini	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	1	Hephaestus fuliginosus	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	2	Melanotaenia splendida inornata	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	1	Melanotaenia nigrans	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	2	Mogurnda mogurnda	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	44	Caridina gracilirostris	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	EL	1	328	16	Caridina typus	On-time 328 sec (Dc:35, V:300, Freq: 10).
FRDSMB	19-May-15	1	1	4	1	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	1	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1	2	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1	2	4	1	Strongylura krefftii	Set 4:30-8:30pm.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FRDSMB	19-May-15	1	2	4	11	Amniataba percoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	1	4	3	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	1	4	3	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	1	4	4	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	1	4	5	Amniataba percoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	1	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	2	4	11	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	2	4	19	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	2	4	15	Amniataba percoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	2	4	2	Toxotes chatareus	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	2	4	1	Strongylura krefftii	Set 4:30-8:30pm.
FRDSMB	19-May-15	1.5	2	4	2	Neosilurus ater	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	1	4	28	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	1	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	1	4	2	Lates calcarifer	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	1	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	1	4	1	Amniataba percoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	2	4	17	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	2	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	2	4	1	Lates calcarifer	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	2	4	3	Neosilurus ater	Set 4:30-8:30pm.
FRDSMB	19-May-15	2L(A)	2	4	2	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	1	4	2	Arius graeffei	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	1	4	18	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	1	4	4	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	1	4	3	Neosilurus ater	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	1	4	2	Toxotes chatareus	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	2	4	10	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	2	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	2	4	8	Neosilurus ater	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	2	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	2	4	2	Arius graeffei	Set 4:30-8:30pm.
FRDSMB	19-May-15	3L(A)	2	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FRDSMB	19-May-15	PN(A)	1	4	3	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	PN(A)	2	4	1	Lates calcarifer	Set 4:30-8:30pm.
FRDSMB	19-May-15	PN(A)	2	4	6	Nematalosa erebi	Set 4:30-8:30pm.
FRDSMB	19-May-15	PN(A)	2	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRDSMB	19-May-15	PN(A)	2	4	1	Arius graeffei	Set 4:30-8:30pm.
FRDSMB	19-May-15	CL	1	1	0		Set from dawn to dusk. NO CATCH.
FRDSMB	19-May-15	CL	2	1	0		Set from dawn to dusk. NO CATCH.
FRDSMB	19-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
FRDSMB	19-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
FRDSMB	19-May-15	CL	5	1	0		Set from dawn to dusk. NO CATCH.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FRDSMB	19-May-15	LFYK	1	1	2	Ambassis macleayi	Set from dawn to dusk.
FRDSMB	19-May-15	LFYK	1	1	1	Neosilurus ater	Set from dawn to dusk.
FRDSMB	19-May-15	LFYK	1	1	2	Macrobrachium bullatum	Set from dawn to dusk.
FRDSMB	19-May-15	LFYK	1	1	1	Macrobrachium spinipes	Set from dawn to dusk.
FRDSMB	19-May-15	LFYK	1	1	1	Cherax quadricarinatus	Set from dawn to dusk.
FRDSMB	19-May-15	LFYK	2	1	1	Macrobrachium bullatum	Set from dawn to dusk.
FRDSMB	19-May-15	LFYK	2	1	2	Glossamia aprion	Set from dawn to dusk.
FRDSMB	19-May-15	VIS	1	1	1	Crocodylus porosus	
FRDSMB	19-May-15	LFYK	2	1	1	Emydura tanybaraga	Set from dawn to dusk.
FRUSFC	30-May-15	VIS	1	1	1	Crocodylus porosus	
FRUSFC	30-May-15	3L(A)	1	4	1	Crocodylus johnsoni	Set 4:30-8:30pm.
FRUSFC	30-May-15	VIS	1	1	1	Crocodylus johnsoni	
FRUSFC	30-May-15	EL	1	462	14	Mogurnda mogurnda	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	6	Melanotaenia nigrans	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	2	Oxyeleotris selhemi	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	48	Caridina gracilirostris	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	117	Caridina typus	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	166	Macrobrachium bullatum	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	5	Leiopotherapon unicolor	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	97	Macrobrachium handschini	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	6	Glossogobius species 2.	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	2	Craterocephalus stramineus	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	1	Macrobrachium spinipes	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	EL	1	462	1	Cherax quadricarinatus	On-time 462 sec (Dc: 15, V: 250, Freq: 25).
FRUSFC	30-May-15	1	1	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	1	4	2	Strongylura krefftii	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	1	4	1	Pingalla sp. A	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	1	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	1	4	4	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	1	4	37	Amniataba percoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	1	4	1	Hephaestus fuliginosus	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	2	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	2	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	2	4	1	Strongylura krefftii	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	2	4	2	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	1	2	4	12	Amniataba percoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	1	4	4	Strongylura krefftii	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	1	4	11	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	1	4	5	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	1	4	13	Amniataba percoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	1	4	8	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	1	4	2	Toxotes chatareus	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	2	4	10	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	2	4	7	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	2	4	1	Strongylura krefftii	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	2	4	4	Toxotes chatareus	Set 4:30-8:30pm.
FRUSFC	30-May-15	1.5	2	4	7	Nematalosa erebi	Set 4:30-8:30pm.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FRUSFC	30-May-15	1.5	2	4	1	Amniataba percoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	2L(A)	1	4	30	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	2L(A)	1	4	1	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRUSFC	30-May-15	2L(A)	1	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	2L(A)	2	4	4	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	2L(A)	2	4	2	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	2L(A)	2	4	1	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	1	4	4	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	1	4	4	Toxotes chatareus	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	1	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	1	4	1	Amniataba percoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	2	4	3	Toxotes chatareus	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	2	4	12	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	2	4	1	Neosilurus ater	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	2	4	2	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSFC	30-May-15	3L(A)	2	4	2	Syncomistes butleri	Set 4:30-8:30pm.
FRUSFC	30-May-15	PN(A)	1	4	6	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	PN(A)	2	4	1	Nematalosa erebi	Set 4:30-8:30pm.
FRUSFC	30-May-15	LFYK	1	1	16	Craterocephalus stramineus	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	1	Melanotaenia nigrans	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	6	Melanotaenia splendida inornata	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	2	Mogurnda mogurnda	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	2	Macrobrachium bullatum	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	8	Caridina gracilirostris	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	1	Ambassis macleayi	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	2	Glossamia aprion	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	1	1	1	Glossogobius species 2.	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	2	1	2	Megalops cyprinoides	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	2	1	1	Oxyeleotris selhemi	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	2	1	9	Craterocephalus stramineus	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	2	1	1	Macrobrachium spinipes	Set from dawn to dusk.
FRUSFC	30-May-15	LFYK	2	1	1	Caridina gracilirostris	Set from dawn to dusk.
FRUSFC	30-May-15	CL	1	1	0		Set from dawn to dusk. NO CATCH.
FRUSFC	30-May-15	CL	2	1	0		Set from dawn to dusk. NO CATCH.
FRUSFC	30-May-15	CL	3	1	0		Set from dawn to dusk. NO CATCH.
FRUSFC	30-May-15	CL	4	1	0		Set from dawn to dusk. NO CATCH.
FRUSFC	30-May-15	CL	5	1	3	Macrobrachium bullatum	Set from dawn to dusk.
FRUSFC	30-May-15	3L(A)	2	4	1	Crocodylus sp	Set 4:30-8:30pm.
FRUSMB	20-May-15	EL	1	302	1	Oxyeleotris selhemi	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	74	Macrobrachium handschini	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	1	Melanotaenia nigrans	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	1	Melanotaenia splendida inornata	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	110	Macrobrachium bullatum	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	22	Caridina gracilirostris	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	11	Caridina typus	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	5	Hephaestus fuliginosus	On-time 302 sec (Dc:35, V:300, Freq: 10).

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FRUSMB	20-May-15	EL	1	302	5	Glossogobius giurus	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	4	Amniataba percoides	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	3	Macrobrachium spinipes	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	2	Mogurnda mogurnda	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	2	Leiopotherapon unicolor	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	5	Neosilurus hyrtlii	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	1	Neosilurus ater	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	EL	1	302	1	Cherax quadricarinatus	On-time 302 sec (Dc:35, V:300, Freq: 10).
FRUSMB	20-May-15	1	1	4	1	Strongylura krefftii	Set 4:30-8:30pm.
FRUSMB	20-May-15	1	2	4	1	Lates calcarifer	Set 4:30-8:30pm.
FRUSMB	20-May-15	1	2	4	16	Amniataba percoides	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	58	Nematalosa erebi	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	4	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	2	Amniataba percoides	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	1	Leiopotherapon unicolor	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	1	Strongylura krefftii	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	1	4	3	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	2	4	41	Nematalosa erebi	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	2	4	3	Megalops cyprinoides	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	2	4	1	Amniataba percoides	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	2	4	1	Syncomistes butleri	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	2	4	1	Toxotes chatareus	Set 4:30-8:30pm.
FRUSMB	20-May-15	1.5	2	4	1	Neosilurus hyrtlii	Set 4:30-8:30pm.
FRUSMB	20-May-15	2L(A)	1	4	4	Nematalosa erebi	Set 4:30-8:30pm.
FRUSMB	20-May-15	2L(A)	1	4	3	Neosilurus ater	Set 4:30-8:30pm.
FRUSMB	20-May-15	2L(A)	1	4	1	Lates calcarifer	Set 4:30-8:30pm.
FRUSMB	20-May-15	2L(A)	2	4	3	Neosilurus ater	Set 4:30-8:30pm.
FRUSMB	20-May-15	2L(A)	2	4	3	Nematalosa erebi	Set 4:30-8:30pm.
FRUSMB	20-May-15	3L(A)	1	4	1	Neosilurus ater	Set 4:30-8:30pm.
FRUSMB	20-May-15	3L(A)	2	4	1	Neosilurus ater	Set 4:30-8:30pm.
FRUSMB	20-May-15	3L(A)	2	4	3	Syncomistes butleri	Set 4:30-8:30pm.
FRUSMB	20-May-15	PN(A)	1	4	1	Lates calcarifer	Set 4:30-8:30pm.
FRUSMB	20-May-15	PN(A)	2	4	0		Set 4:30-8:30pm. NO CATCH.
FRUSMB	20-May-15	CL	1	1	0		Set from dusk to dawn. NO CATCH.
FRUSMB	20-May-15	CL	2	1	0		Set from dusk to dawn. NO CATCH.
FRUSMB	20-May-15	CL	3	1	0		Set from dusk to dawn. NO CATCH.
FRUSMB	20-May-15	CL	4	1	0		Set from dusk to dawn. NO CATCH.
FRUSMB	20-May-15	CL	5	1	0		Set from dusk to dawn. NO CATCH.

site	Date	method	method_replicate	scaling factor	Total Abundance	Sp_name	Sample.Remarks
FRUSMB	20-May-15	SFYK	1	1	1	Lates calcarifer	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	2	Oxyeleotris selhemi	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	2	Melanotaenia splendida inornata	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	9	Macrobrachium spinipes	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	2	Macrobrachium bullatum	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	4	Craterocephalus stramineus	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	2	Macrobrachium handschini	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	1	Caridina gracilirostris	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	2	1	2	Macrobrachium spinipes	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	2	1	2	Craterocephalus stramineus	Set from dusk to dawn.
FRUSMB	20-May-15	SFYK	1	1	1	Chelodina rugosa	Set from dusk to dawn.
FRUSMB	20-May-15	VIS	1	1	1	Crocodylus porosus	
FRUSMB	20-May-15	VIS	1	1	1	Crocodylus johnsoni	

APPENDIX 6 2014 FISH DATA

site	date	method	method_replicate	Sp_name	Abundance_raw	Biomass_raw
EB@GS097	27-May-14	EL	1	Mogurnda mogurnda	57	0
EB@GS097	27-May-14	EL	1	Macrobrachium sp (unidentified)	44	0
EB@GS097	27-May-14	EL	1	Melanotaenia splendida inornata	15	0
EB@GS097	27-May-14	EL	1	Ambassis macleayi	7	0
EB@GS097	27-May-14	EL	1	Melanotaenia nigrans	3	0
EB@GS097	27-May-14	EL	1	Glossamia aprion	2	0
EB@GS097	27-May-14	EL	1	Leiopotherapon unicolor	1	0
EB@GS097	26-May-14	LFYK	1	Ambassis macleayi	76	61.6
EB@GS097	26-May-14	LFYK	1	Glossamia aprion	8	241.7
EB@GS097	26-May-14	LFYK	1	Melanotaenia splendida inornata	7	4.5
EB@GS097	26-May-14	LFYK	1	Craterocephalus stercusmuscarum	6	3.8
EB@GS097	26-May-14	LFYK	1	Neosilurus hyrtlii	3	43
EB@GS097	26-May-14	LFYK	1	Neosilurus ater	2	28.9
EB@GS097	26-May-14	LFYK	1	Melanotaenia nigrans	2	1.5
EB@GS097	26-May-14	LFYK	1	Oxyeleotris selhemi	1	123.3
EB@GS097	26-May-14	LFYK	1	Mogurnda mogurnda	1	2
EB@GS097	26-May-14	LFYK	2	Ambassis macleayi	33	24.4
EB@GS097	26-May-14	LFYK	2	Craterocephalus stercusmuscarum	16	9.6
EB@GS097	26-May-14	LFYK	2	Melanotaenia splendida inornata	11	18
EB@GS097	26-May-14	LFYK	2	Glossamia aprion	7	113.1
EB@GS097	26-May-14	LFYK	2	Macrobrachium bullatum	6	3.5
EB@GS097	26-May-14	LFYK	2	Oxyeleotris selhemi	4	870
EB@GS097	26-May-14	LFYK	2	Melanotaenia nigrans	4	1.4
EB@GS097	26-May-14	LFYK	2	Glossogobius species 2.	1	5.2
EB@GS097	26-May-14	LFYK	2		1	0
EB@GS097	28-May-14	SFYK	1	Melanotaenia splendida inornata	4	0
EB@GS097	28-May-14	SFYK	1	Glossamia aprion	3	0
EB@GS097	28-May-14	SFYK	1	Oxyeleotris selhemi	2	0
EB@GS097	28-May-14	SFYK	1	Neosilurus hyrtlii	1	0
EB@GS097	28-May-14	SFYK	1	Macrobrachium sp (unidentified)	1	0
EB@GS097	28-May-14	SFYK	2	Ambassis macleayi	16	0
EB@GS097	28-May-14	SFYK	2	Melanotaenia splendida inornata	5	0
EB@GS097	28-May-14	SFYK	2	Glossamia aprion	3	0
EB@GS097	28-May-14	SFYK	2	Craterocephalus stercusmuscarum	2	0
EB@GS097	28-May-14	SFYK	2	Macrobrachium bullatum	2	0
EB@GS097	28-May-14	SFYK	2	Neosilurus hyrtlii	1	0
EB@GS200	25-May-14	EL	1	Macrobrachium bullatum	3	2
EB@GS200	25-May-14	EL	1	Mogurnda mogurnda	2	9.4
EB@GS200	25-May-14	LFYK	1	Mogurnda mogurnda	19	72

site	date	method	method_replicate	Sp_name	Abundance_raw	Biomass_raw
EB@GS200	25-May-14	LFYK	1	Melanotaenia nigrans	18	10
EB@GS200	25-May-14	LFYK	1	Melanotaenia splendida inornata	12	12
EB@GS200	25-May-14	LFYK	1	Dytiscid sp 2 (Medium)	2	2.3
EB@GS200	25-May-14	LFYK	1	Macrobrachium bullatum	1	1
EB@GS200	25-May-14	LFYK	2	Melanotaenia nigrans	45	18
EB@GS200	25-May-14	LFYK	2	Mogurnda mogurnda	37	142
EB@GS200	25-May-14	LFYK	2	Macrobrachium bullatum	36	14
EB@GS200	25-May-14	LFYK	2	Melanotaenia splendida inornata	5	2
EB@GS200	25-May-14	LFYK	2	Holthuisana transversa	1	3
EB@GS200	25-May-14	LFYK	2	Dytiscid sp 2 (Medium)	1	2.9
EB@GS200	25-May-14	LFYK	2	Ambassis macleayi	1	2.4
EB@GS327	29-May-14	EL	1	Macrobrachium sp (unidentified)	140	0
EB@GS327	29-May-14	EL	1	Melanotaenia nigrans	9	0
EB@GS327	29-May-14	EL	1	Mogurnda mogurnda	4	0
EB@GS327	29-May-14	EL	1	Melanotaenia splendida inornata	3	0
EB@GS327	29-May-14	EL	1	Neosilurus hyrtlii	1	0
EB@GS327	29-May-14	LFYK	1	Ambassis macleayi	50	91
EB@GS327	29-May-14	LFYK	1	Macrobrachium sp (unidentified)	11	0.6
EB@GS327	29-May-14	LFYK	1	Neosilurus hyrtlii	2	40.4
EB@GS327	29-May-14	LFYK	1	Melanotaenia nigrans	2	1.7
EB@GS327	29-May-14	LFYK	1	Crocodylus johnsoni	2	0
EB@GS327	29-May-14	LFYK	1	Melanotaenia splendida inornata	1	5.1
EB@GS327	29-May-14	LFYK	2	Macrobrachium sp (unidentified)	55	24
EB@GS327	29-May-14	LFYK	2	Melanotaenia nigrans	35	35.4
EB@GS327	29-May-14	LFYK	2	Melanotaenia splendida inornata	11	6.1
EB@GS327	29-May-14	LFYK	2	Mogurnda mogurnda	7	24.6
EB@GS327	29-May-14	LFYK	2	Ambassis macleayi	5	8.3
EB@GS327	29-May-14	LFYK	2	Neosilurus hyrtlii	2	11.5
EB@LB	23-May-14	EL	1	Mogurnda mogurnda	131	150
EB@LB	23-May-14	EL	1	Macrobrachium bullatum	33	23
EB@LB	23-May-14	EL	1	Melanotaenia splendida inornata	4	2
EB@LB	23-May-14	EL	1	Melanotaenia nigrans	2	1
EB@LB	23-May-14	EL	1	Macrobrachium sp 3	1	1
EB@LB	23-May-14	SFYK	1	Mogurnda mogurnda	570	1338
EB@LB	23-May-14	SFYK	1	Neosilurus hyrtlii	264	450
EB@LB	23-May-14	SFYK	1	Macrobrachium bullatum	87	46
EB@LB	23-May-14	SFYK	1	Melanotaenia nigrans	56	18
EB@LB	23-May-14	SFYK	1	Melanotaenia splendida inornata	48	66
EB@LB	23-May-14	SFYK	1	Macrobrachium sp 3	13	2
EB@LB	23-May-14	SFYK	1	Ambassis macleayi	5	4

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
EB@LB	23-May-14	SFYK	1	Holthuisana transversa	1	0
EB@LB	23-May-14	SFYK	2	Macrobrachium bullatum	525	153
EB@LB	23-May-14	SFYK	2	Melanotaenia nigrans	394	156
EB@LB	23-May-14	SFYK	2	Mogurnda mogurnda	145	920
EB@LB	23-May-14	SFYK	2	Neosilurus hyrtlii	110	248
EB@LB	23-May-14	SFYK	2	Ambassis macleayi	96	62
EB@LB	23-May-14	SFYK	2	Melanotaenia splendida inornata	89	40
EB@LB	23-May-14	SFYK	2	Macrobrachium spinipes	84	49
EB@LB	23-May-14	SFYK	2	Macrobrachium sp 3	65	13
EB@LB	23-May-14	SFYK	2	Holthuisana transversa	6	44
EBDSHS	28-May-14	EL	1	Macrobrachium sp (unidentified)	169	0
EBDSHS	28-May-14	EL	1	Mogurnda mogurnda	14	0
EBDSHS	28-May-14	EL	1	Melanotaenia nigrans	4	0
EBDSHS	28-May-14	EL	1	Melanotaenia splendida inornata	3	0
EBDSHS	28-May-14	EL	1	Neosilurus hyrtlii	3	0
EBDSHS	28-May-14	EL	1	Glossogobius species 2.	2	0
EBDSHS	28-May-14	EL	1	Ambassis macleayi	1	0
EBDSHS	28-May-14	EL	1	Glossamia aprion	1	0
EBDSHS	28-May-14	EL	1	Neosilurus ater	1	0
EBDSHS	28-May-14	EL	1	Macrobrachium sp 2	1	0
EBDSHS	29-May-14	LFYK	1	Ambassis macleayi	9	9.8
EBDSHS	29-May-14	LFYK	1	Glossamia aprion	3	107.3
EBDSHS	29-May-14	LFYK	1	Neosilurus hyrtlii	3	32.8
EBDSHS	29-May-14	LFYK	1	Oxyeleotris selhemi	2	402
EBDSHS	29-May-14	LFYK	2	Melanotaenia splendida inornata	12	27.3
EBDSHS	29-May-14	LFYK	2	Ambassis macleayi	7	7.4
EBDSHS	29-May-14	LFYK	2	Glossamia aprion	4	99.2
EBDSHS	29-May-14	LFYK	2	Neosilurus hyrtlii	4	60
EBDSHS	29-May-14	LFYK	2	Neosilurus ater	3	44.1
EBDSHS	29-May-14	LFYK	2	Oxyeleotris selhemi	2	242
EBDSHS	29-May-14	LFYK	2	Mogurnda mogurnda	1	2.1
EBDSHS	29-May-14	LFYK	2	Macrobrachium bullatum	1	1.5
EBDSHS	29-May-14	LFYK	2	Craterocephalus stramineus	1	0.5
EBDSRB	26-May-14	EL	1	Macrobrachium sp 3	63	0
EBDSRB	26-May-14	EL	1	Macrobrachium spinipes	63	0
EBDSRB	26-May-14	EL	1	Mogurnda mogurnda	16	42
EBDSRB	26-May-14	EL	1	Macrobrachium bullatum	6	0
EBDSRB	26-May-14	EL	1	Melanotaenia nigrans	5	3
EBDSRB	26-May-14	EL	1	Melanotaenia splendida inornata	4	2

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
EBDSRB	26-May-14	EL	1	Glossamia aprion	2	114
EBDSRB	26-May-14	LFYK	1	Melanotaenia splendida inornata	21	24
EBDSRB	26-May-14	LFYK	1	Melanotaenia nigrans	18	18
EBDSRB	26-May-14	LFYK	1	Ambassis macleayi	6	12
EBDSRB	26-May-14	LFYK	1	Macrobrachium bullatum	4	2
EBDSRB	26-May-14	LFYK	1	Glossamia aprion	2	114
EBDSRB	26-May-14	LFYK	1	Mogurnda mogurnda	2	4
EBDSRB	26-May-14	LFYK	2	Melanotaenia nigrans	40	36
EBDSRB	26-May-14	LFYK	2	Melanotaenia splendida inornata	18	14.2
EBDSRB	26-May-14	LFYK	2	Glossamia aprion	3	196
EBDSRB	26-May-14	LFYK	2	Mogurnda mogurnda	2	6
EBDSRB	26-May-14	LFYK	2	Macrobrachium sp 3	1	1
EBDSRB	26-May-14	LFYK	2	Macrobrachium spinipes	1	1
EBDSRB	26-May-14	LFYK	2	Macrobrachium bullatum	1	1
EBUSFR	30-May-14	EL	1	Macrobrachium bullatum	164	0
EBUSFR	30-May-14	EL	1	Mogurnda mogurnda	17	0
EBUSFR	30-May-14	EL	1	Neosilurus hyrtlii	17	0
EBUSFR	30-May-14	EL	1	Glossogobius species 2.	2	0
EBUSFR	30-May-14	EL	1	Oxyeleotris selhemi	1	0
EBUSFR	30-May-14	EL	1	Melanotaenia nigrans	1	0
EBUSFR	30-May-14	EL	1	Macrobrachium sp 2	1	0
EBUSFR	31-May-14	LFYK	1	Macrobrachium bullatum	72	0
EBUSFR	31-May-14	LFYK	1	Melanotaenia splendida inornata	8	15.1
EBUSFR	31-May-14	LFYK	1	Mogurnda mogurnda	6	43
EBUSFR	31-May-14	LFYK	1	Hephaestus fuliginosus	6	43
EBUSFR	31-May-14	LFYK	1	Melanotaenia nigrans	5	3.4
EBUSFR	31-May-14	LFYK	1	Neosilurus hyrtlii	3	14.2
EBUSFR	31-May-14	LFYK	1	Macrobrachium sp 2	2	0
EBUSFR	31-May-14	LFYK	1	Neosilurus ater	1	3.6
EBUSFR	31-May-14	LFYK	1	Oxyeleotris selhemi	1	3.5
EBUSFR	31-May-14	LFYK	1	Ambassis macleayi	1	2.4
EBUSFR	31-May-14	LFYK	1	Craterocephalus stercusmuscarum	1	1.7
EBUSFR	31-May-14	LFYK	1	Cherax quadricarinatus	1	0
EBUSFR	31-May-14	LFYK	2	Macrobrachium bullatum	25	0
EBUSFR	31-May-14	LFYK	2	Melanotaenia splendida inornata	4	21.3
EBUSFR	31-May-14	LFYK	2	Glossamia aprion	3	75.6
EBUSFR	31-May-14	LFYK	2	Neosilurus hyrtlii	3	35.8
EBUSFR	31-May-14	LFYK	2	Craterocephalus stramineus	3	3.3
EBUSHS	27-May-14	EL	1	Macrobrachium sp (unidentified)	103	0

site	date	method	method_replicate	Sp_name	Abundance_raw	Biomass_raw
EBUSHS	27-May-14	EL	1	Mogurnda mogurnda	34	0
EBUSHS	27-May-14	EL	1	Glossamia aprion	4	0
EBUSHS	27-May-14	EL	1	Melanotaenia splendida inornata	4	0
EBUSHS	27-May-14	EL	1	Oxyeleotris lineolata	1	214
EBUSHS	27-May-14	EL	1	Melanotaenia nigrans	1	0
EBUSHS	27-May-14	LFYK	1	Oxyeleotris selhemi	3	868
EBUSHS	27-May-14	LFYK	1	Glossamia aprion	3	144
EBUSHS	27-May-14	LFYK	1	Neosilurus hyrtlii	1	14.9
EBUSHS	27-May-14	LFYK	1	Crocodylus johnsoni	1	0
EBUSHS	27-May-14	LFYK	2	Neosilurus ater	1	19.4
EBUSHS	27-May-14	LFYK	2	Neosilurus hyrtlii	1	8.8
EBUSHS	27-May-14	LFYK	2	Ambassis macleayi	1	1
EBUSHS	27-May-14	LFYK	2	Crocodylus johnsoni	1	0
FC@LB	23-May-14	EL	1	Macrobrachium bullatum	13	3
FC@LB	23-May-14	EL	1	Mogurnda mogurnda	7	4.7
FC@LB	23-May-14	EL	1	Macrobrachium sp 3	1	1
FC@LB	23-May-14	EL	1	Ambassis macleayi	1	0.8
FC@LB	23-May-14	EL	1	Melanotaenia splendida inornata	1	0.8
FC@LB	23-May-14	EL	1	Holthuisana transversa	1	0
FC@LB	23-May-14	SFYK	1	Mogurnda mogurnda	51	36.7
FC@LB	23-May-14	SFYK	1	Macrobrachium spinipes	26	11.1
FC@LB	23-May-14	SFYK	1	Melanotaenia nigrans	23	7.1
FC@LB	23-May-14	SFYK	1	Holthuisana transversa	9	44.2
FC@LB	23-May-14	SFYK	1	Dytiscid sp 2 (Medium)	4	0
FC@LB	23-May-14	SFYK	1	Ambassis macleayi	2	2.5
FC@LB	23-May-14	SFYK	2	Macrobrachium spinipes	53	18.7
FC@LB	23-May-14	SFYK	2	Mogurnda mogurnda	9	9.5
FC@LB	23-May-14	SFYK	2	Ambassis macleayi	6	2.2
FC@LB	23-May-14	SFYK	2	Dytiscid sp 2 (Medium)	3	0
FR@GS204	31-May-14	1.5F	1	Toxotes chatareus	1	26
FR@GS204	31-May-14	1.5F	1	Megalops cyprinoides	2	158
FR@GS204	31-May-14	1.5F	1	Nematalosa erebi	7	166
FR@GS204	31-May-14	1F L	1	Ambassis macleayi	1.6	7.5
FR@GS204	31-May-14	1F L	1	Megalops cyprinoides	1.6	464.8
FR@GS204	31-May-14	1F L	1	Syncomistes butleri	1.6	143.0
FR@GS204	31-May-14	1F L	1	Amniaataba percoides	3.3	45.5
FR@GS204	31-May-14	1F L	1	Hephaestus fuliginosus	4.9	201.5
FR@GS204	31-May-14	1F L	1	Melanotaenia splendida inornata	6.5	52.0
FR@GS204	31-May-14	1F L	1	Nematalosa erebi	6.5	78.5

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
FR@GS204	01-Jun-14	1S L	1	Ambassis macleayi	1.6	10.7
FR@GS204	31-May-14	2F L	1	Toxotes chatareus	2.6	78.1
FR@GS204	31-May-14	2F L	1	Lates calcarifer	7.8	1229.2
FR@GS204	31-May-14	2F L	1	Megalops cyprinoides	7.8	989.6
FR@GS204	31-May-14	2F L	1	Syncomistes butleri	10.4	1312.5
FR@GS204	01-Jun-14	2F L	1	Glossamia aprion	2.6	166.7
FR@GS204	31-May-14	3F	1	Sciades paucus	1	520
FR@GS204	31-May-14	3F	1	Syncomistes butleri	1	274
FR@GS204	31-May-14	3F	1	Toxotes chatareus	1	240
FR@GS204	31-May-14	3F	1	Neosilurus ater	3	1166
FR@GS204	31-May-14	3F	1	Megalops cyprinoides	4	1430
FR@GS204	31-May-14	3F	1	Nematalosa erebi	12	4496
FR@GS204	01-Jun-14	EL	1	Caradina grasiliorostrus	107	0
FR@GS204	01-Jun-14	EL	1	Macrobrachium bullatum	68	0
FR@GS204	01-Jun-14	EL	1	Macrobrachium sp 2	64	0
FR@GS204	01-Jun-14	EL	1	Caradina typus	20	0
FR@GS204	01-Jun-14	EL	1	Mogurnda mogurnda	7	0
FR@GS204	01-Jun-14	EL	1	Glossogobius species 2.	5	0
FR@GS204	01-Jun-14	EL	1	Glossamia aprion	2	0
FR@GS204	01-Jun-14	EL	1	Melanotaenia splendida inornata	2	0
FR@GS204	01-Jun-14	EL	1	Melanotaenia nigrans	1	0
FR@GS204	01-Jun-14	EL	1	Neosilurus ater	1	0
FR@GS204	01-Jun-14	EL	1	Ophisternon bengalense	1	0
FR@GS204	01-Jun-14	EL	1	Hephaestus fuliginosus	1	0
FR@GS204	01-Jun-14	LFYK	1	Melanotaenia splendida inornata	3	11.1
FR@GS204	01-Jun-14	LFYK	1	Lates calcarifer	1	184.5
FR@GS204	01-Jun-14	LFYK	1	Craterocephalus stramineus	1	1.6
FR@GS204	01-Jun-14	LFYK	2	Craterocephalus stramineus	8	5.3
FR@GS204	01-Jun-14	LFYK	2	Macrobrachium sp 2	2	1.2
FR@GS204	01-Jun-14	LFYK	2	Glossamia aprion	1	13.8
FR3	01-Jun-14	1.5F	1	Neosilurus ater	1	74
FR3	01-Jun-14	1.5F	1	Strongylura krefftii	1	148
FR3	01-Jun-14	1.5F	1	Amniaataba percoides	2	62.5
FR3	01-Jun-14	1.5F	1	Lates calcarifer	2	1836
FR3	01-Jun-14	1.5F	1	Nematalosa erebi	2	45.7
FR3	02-Jun-14	1.5F	1	Megalops cyprinoides	1	59
FR3	01-Jun-14	1.5S	1	Megalops cyprinoides	1	68.7
FR3	01-Jun-14	1.5S	1	Nematalosa erebi	10	226.7

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
FR3	02-Jun-14	1.5S	1	Strongylura krefftii	1	114
FR3	01-Jun-14	1F L	1	Strongylura krefftii	1.6	79.0
FR3	01-Jun-14	1F L	1	Toxotes chatareus	1.6	300.6
FR3	01-Jun-14	1F L	1	Nematalosa erebi	3.3	237.7
FR3	02-Jun-14	1F L	1		NC	NC
FR3	01-Jun-14	1S L	1	Nematalosa erebi	1.6	19.3
FR3	01-Jun-14	1S L	1	Neoarius bernyi	1.6	21.8
FR3	01-Jun-14	1S L	1	Syncomistes butleri	3.3	919.8
FR3	01-Jun-14	1S L	1	Melanotaenia splendida inornata	4.9	45.2
FR3	01-Jun-14	1S L	1	Strongylura krefftii	4.9	416.0
FR3	02-Jun-14	1S L	1	Megalops cyprinoides	1.6	503.8
FR3	01-Jun-14	2F L	1	Amniaataba percoides	2.6	132.8
FR3	01-Jun-14	2F L	1	Lates calcarifer	2.6	432.3
FR3	01-Jun-14	2F L	1	Nematalosa erebi	2.6	148.2
FR3	01-Jun-14	2F L	1	Neosilurus ater	5.2	1755.2
FR3	01-Jun-14	2F L	1	Toxotes chatareus	10.4	635.4
FR3	01-Jun-14	2F L	1	Megalops cyprinoides	26.0	5463.5
FR3	01-Jun-14	2S L	1	Amniaataba percoides	2.6	138.3
FR3	01-Jun-14	2S L	1	Neosilurus ater	2.6	1026.0
FR3	01-Jun-14	2S L	1	Hephaestus fuliginosus	7.8	593.8
FR3	01-Jun-14	2S L	1	Toxotes chatareus	10.4	635.4
FR3	01-Jun-14	2S L	1	Megalops cyprinoides	15.6	3828.1
FR3	01-Jun-14	2S L	1	Nematalosa erebi	31.3	6869.8
FR3	02-Jun-14	2S L	1	Lates calcarifer	2.6	791.7
FR3	01-Jun-14	3F	1	Megalops cyprinoides	2	678
FR3	01-Jun-14	3F	1	Toxotes chatareus	7	1916
FR3	01-Jun-14	3F	1	Neosilurus ater	10	4068
FR3	01-Jun-14	3F	1	Nematalosa erebi	34	9814
FR3	01-Jun-14	3S	1	Megalops cyprinoides	1	564
FR3	01-Jun-14	3S	1	Toxotes chatareus	2	446
FR3	01-Jun-14	3S	1	Syncomistes butleri	6	1738
FR3	01-Jun-14	3S	1	Neosilurus ater	10	3688
FR3	01-Jun-14	3S	1	Nematalosa erebi	28	7408
FR3	02-Jun-14	3S	1		NC	
FR3	02-Jun-14	EL	1	Caradina grasiliorostrus	90	0
FR3	02-Jun-14	EL	1	Macrobrachium bullatum	43	0
FR3	02-Jun-14	EL	1	Macrobrachium sp 2	17	0
FR3	02-Jun-14	EL	1	Caradina typus	11	0
FR3	02-Jun-14	EL	1	Mogurnda mogurnda	4	0

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
FR3	02-Jun-14	EL	1	Oxyeleotris lineolata	2	0
FR3	02-Jun-14	EL	1	Glossamia aprion	1	0
FR3	02-Jun-14	EL	1	Melanotaenia nigrans	1	0
FR3	02-Jun-14	EL	1	Melanotaenia splendida inornata	1	0
FR3	02-Jun-14	EL	1	Neosilurus ater	1	0
FR3	02-Jun-14	EL	1	Glossogobius species 2.	1	0
FR3	02-Jun-14	LFYK	1	Craterocephalus stramineus	5	0.9
FR3	02-Jun-14	LFYK	1	Macrobrachium sp (unidentified)	4	0
FR3	02-Jun-14	LFYK	1	Megalops cyprinoides	1	374
FR3	02-Jun-14	LFYK	1	Melanotaenia splendida inornata	1	36
FR3	02-Jun-14	LFYK	1	Glossogobius species 2.	1	2.3
FR3	02-Jun-14	LFYK	2	Craterocephalus stramineus	15	4.9
FR3	02-Jun-14	LFYK	2	Glossamia aprion	1	46.8
FR3	02-Jun-14	LFYK	2	Ambassis macleayi	1	2.7
FR3	02-Jun-14	LFYK	2	Melanotaenia splendida inornata	1	0.3
FR3	02-Jun-14	LFYK	2	Macrobrachium sp (unidentified)	1	0
FRDSFC	02-Jun-14	1.5F	1	Strongylura krefftii	4	564
FRDSFC	02-Jun-14	1.5F	1	Nematalosa erebi	13	448
FRDSFC	03-Jun-14	1.5F	1	Megalops cyprinoides	2	133.5
FRDSFC	02-Jun-14	1.5S	1	Megalops cyprinoides	4	250.9
FRDSFC	02-Jun-14	1.5S	1	Nematalosa erebi	6	185.2
FRDSFC	02-Jun-14	1F L	1	Strongylura krefftii	1.6	94.7
FRDSFC	03-Jun-14	1F L	1		NC	NC
FRDSFC	02-Jun-14	1S L	1	Nematalosa erebi	1.6	20.5
FRDSFC	02-Jun-14	1S L	1	Amniaataba percoides	6.5	95.7
FRDSFC	03-Jun-14	1S L	1	Strongylura krefftii	1.6	117.0
FRDSFC	02-Jun-14	2F L	1	Toxotes chatareus	5.2	942.7
FRDSFC	02-Jun-14	2F L	1	Nematalosa erebi	26.0	2645.8
FRDSFC	02-Jun-14	2F L	1	Megalops cyprinoides	33.9	6458.3
FRDSFC	02-Jun-14	2S L	1	Hephaestus fuliginosus	2.6	146.6
FRDSFC	02-Jun-14	2S L	1	Syncomistes butleri	2.6	854.2
FRDSFC	02-Jun-14	2S L	1	Neosilurus ater	5.2	1619.8
FRDSFC	02-Jun-14	2S L	1	Megalops cyprinoides	10.4	2229.2
FRDSFC	02-Jun-14	2S L	1	Neosilurus hyrtlii	13.0	1599.0
FRDSFC	02-Jun-14	2S L	1	Nematalosa erebi	31.3	2635.4
FRDSFC	02-Jun-14	3F	1	Megalops cyprinoides	1	636
FRDSFC	02-Jun-14	3F	1	Sciades paucus	1	1036
FRDSFC	02-Jun-14	3F	1	Neosilurus ater	2	294
FRDSFC	02-Jun-14	3F	1	Toxotes chatareus	2	674

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
FRDSFC	02-Jun-14	3F	1	Nematalosa erebi	43	9400
FRDSFC	02-Jun-14	3S	1	Hephaestus fuliginosus	1	810
FRDSFC	02-Jun-14	3S	1	Syncomistes butleri	2	702
FRDSFC	02-Jun-14	3S	1	Neosilurus ater	3	984
FRDSFC	02-Jun-14	3S	1	Sciades paucus	3	2832
FRDSFC	02-Jun-14	3S	1	Megalops cyprinoides	7	3750
FRDSFC	02-Jun-14	3S	1	Nematalosa erebi	62	15254
FRDSFC	03-Jun-14	3S	1	Lates calcarifer	1	1658
FRDSFC	03-Jun-14	EL	1	Macrobrachium bullatum	167	0
FRDSFC	03-Jun-14	EL	1	Macrobrachium sp 2	81	0
FRDSFC	03-Jun-14	EL	1	Caridina cf longirostris	22	0
FRDSFC	03-Jun-14	EL	1	Caradina typus	20	0
FRDSFC	03-Jun-14	EL	1	Caradina grasiliorostrus	18	0
FRDSFC	03-Jun-14	EL	1	Melanotaenia nigrans	2	0
FRDSFC	03-Jun-14	EL	1	Glossogobius species 2.	2	0
FRDSFC	03-Jun-14	EL	1	Glossamia aprion	1	0
FRDSFC	03-Jun-14	EL	1	Mogurnda mogurnda	1	0
FRDSFC	03-Jun-14	EL	1	Melanotaenia splendida inornata	1	0
FRDSFC	03-Jun-14	EL	1	Leiopotherapon unicolor	1	0
FRDSFC	03-Jun-14	EL	1	Cherax quadricarinatus	1	0
FRDSMB	19-May-14	1.5F	1	Toxotes chatareus	1	0.04
FRDSMB	19-May-14	1.5F	1	Megalops cyprinoides	2	0.15
FRDSMB	19-May-14	1.5F	1	Nematalosa erebi	5	0.24
FRDSMB	19-May-14	1.5S	1	Neosilurus ater	1	0.08
FRDSMB	19-May-14	1.5S	1	Strongylura krefftii	1	0.17
FRDSMB	19-May-14	1.5S	1	Syncomistes butleri	1	0.15
FRDSMB	19-May-14	1.5S	1	Nematalosa erebi	9	0.25
FRDSMB	19-May-14	1F L	1	Nematalosa erebi	1.6	0.3
FRDSMB	19-May-14	1S L	1	Neosilurus hyrtlii	1.6	0.3
FRDSMB	19-May-14	1S L	1	Strongylura krefftii	1.6	0.5
FRDSMB	19-May-14	1S L	1	Nematalosa erebi	21.1	0.8
FRDSMB	19-May-14	2F L	1	Neosilurus hyrtlii	2.6	0.6
FRDSMB	19-May-14	2F L	1	Toxotes chatareus	2.6	0.3
FRDSMB	19-May-14	2F L	1	Megalops cyprinoides	15.6	2.9
FRDSMB	19-May-14	2F L	1	Nematalosa erebi	44.3	4.4
FRDSMB	19-May-14	2S L	1	Toxotes chatareus	2.6	0.4
FRDSMB	19-May-14	2S L	1	Megalops cyprinoides	7.8	1.5
FRDSMB	19-May-14	2S L	1	Nematalosa erebi	31.3	3.6
FRDSMB	19-May-14	3F	1	Toxotes chatareus	3	540

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
FRDSMB	19-May-14	3F	1	Megalops cyprinoides	5	1940
FRDSMB	19-May-14	3F	1	Neosilurus hyrtlii	5	1760
FRDSMB	19-May-14	3F	1	Nematalosa erebi	45	16300
FRDSMB	19-May-14	3S	1	Megalops cyprinoides	4	1840
FRDSMB	19-May-14	3S	1	Syncomistes butleri	6	1700
FRDSMB	19-May-14	3S	1	Toxotes chatareus	7	1520
FRDSMB	19-May-14	3S	1	Neosilurus hyrtlii	9	2836
FRDSMB	19-May-14	3S	1	Nematalosa erebi	48	17003
FRDSMB	21-May-14	LFYK	1	Toxotes chatareus	1	254.8
FRDSMB	21-May-14	LFYK	1	Glossamia aprion	1	20.8
FRDSMB	21-May-14	LFYK	1	Ambassis macleayi	1	0.8
FRDSMB	21-May-14	LFYK	1	Craterocephalus stercusmuscarum	1	0.7
FRDSMB	21-May-14	LFYK	1	Melanotaenia splendida inornata	1	0.05
FRDSMB	21-May-14	LFYK	1	Unidentified sp.	1	0
FRDSMB	21-May-14	LFYK	2	Melanotaenia nigrans	5	4.1
FRDSMB	21-May-14	LFYK	2	Unidentified sp.	2	0
FRDSMB	21-May-14	LFYK	2	Glossamia aprion	1	37.7
FRDSMB	21-May-14	LFYK	2	Melanotaenia splendida inornata	1	0.4
FRUSFC	03-Jun-14	1.5F	1	Syncomistes butleri	1	80
FRUSFC	03-Jun-14	1.5F	1	Strongylura krefftii	6	856
FRUSFC	03-Jun-14	1.5F	1	Nematalosa erebi	9	344
FRUSFC	03-Jun-14	1.5F	1	Megalops cyprinoides	12	790
FRUSFC	03-Jun-14	1.5S	1	Syncomistes butleri	1	74.7
FRUSFC	03-Jun-14	1.5S	1	Megalops cyprinoides	2	102
FRUSFC	03-Jun-14	1.5S	1	Nematalosa erebi	17	489.8
FRUSFC	03-Jun-14	1F L	1	Strongylura krefftii	4.9	507.0
FRUSFC	03-Jun-14	1F L	1	Neoarius bernyi	6.5	110.5
FRUSFC	03-Jun-14	1F L	1	Nematalosa erebi	13.0	147.7
FRUSFC	03-Jun-14	1S L	1	Syncomistes butleri	1.6	585.0
FRUSFC	03-Jun-14	1S L	1	Nematalosa erebi	4.9	64.7
FRUSFC	03-Jun-14	1S L	1	Amniaataba percoides	37.4	406.3
FRUSFC	03-Jun-14	2F L	1	Toxotes chatareus	10.4	822.9
FRUSFC	03-Jun-14	2F L	1	Nematalosa erebi	13.0	3583.3
FRUSFC	03-Jun-14	2F L	1	Megalops cyprinoides	15.6	6229.2
FRUSFC	03-Jun-14	2F L	1	Syncomistes butleri	49.5	7692.7
FRUSFC	03-Jun-14	2S L	1	Strongylura krefftii	2.6	859.4
FRUSFC	03-Jun-14	2S L	1	Toxotes lorentzi	2.6	307.3
FRUSFC	03-Jun-14	2S L	1	Megalops cyprinoides	5.2	1072.9
FRUSFC	03-Jun-14	2S L	1	Syncomistes butleri	23.4	3119.8

site	date	method	method_ replicate	Sp_name	Abundance_raw	Biomass_raw
FRUSFC	03-Jun-14	2S L	1	Nematalosa erebi	26.0	3291.7
FRUSFC	03-Jun-14	3F	1	Neoarius bernyi	1	570
FRUSFC	03-Jun-14	3F	1	Syncomistes butleri	1	180
FRUSFC	03-Jun-14	3F	1	Neosilurus ater	4	1282
FRUSFC	03-Jun-14	3F	1	Megalops cyprinoides	5	2708
FRUSFC	03-Jun-14	3F	1	Toxotes chatareus	19	1213
FRUSFC	03-Jun-14	3F	1	Nematalosa erebi	66	15896
FRUSFC	03-Jun-14	3S	1	Hephaestus fuliginosus	1	194
FRUSFC	03-Jun-14	3S	1	Neosilurus ater	1	200
FRUSFC	03-Jun-14	3S	1	Syncomistes butleri	1	270
FRUSFC	03-Jun-14	3S	1	Megalops cyprinoides	4	1854
FRUSFC	03-Jun-14	3S	1	Toxotes chatareus	4	908
FRUSFC	03-Jun-14	3S	1	Nematalosa erebi	56	15656
FRUSFC	04-Jun-14	3S	1	Nematalosa erebi	14	2654
FRUSFC	03-Jun-14	EL	1	Macrobrachium bullatum	210	0
FRUSFC	03-Jun-14	EL	1	Macrobrachium sp 3	133	0
FRUSFC	03-Jun-14	EL	1	Caradina grasiliorostrus	26	0
FRUSFC	03-Jun-14	EL	1	Caradina typus	21	0
FRUSFC	03-Jun-14	EL	1	Mogurnda mogurnda	16	0
FRUSFC	03-Jun-14	EL	1	Caridina cf longirostris	10	0
FRUSFC	03-Jun-14	EL	1	Craterocephalus stramineus	7	0
FRUSFC	03-Jun-14	EL	1	Glossogobius species 2.	5	0
FRUSFC	03-Jun-14	EL	1	Neosilurus ater	4	0
FRUSFC	03-Jun-14	EL	1	Leiopotherapon unicolor	3	0
FRUSFC	03-Jun-14	EL	1	Neosilurus hyrtlii	2	0
FRUSFC	03-Jun-14	EL	1	Lates calcarifer	1	0
FRUSFC	03-Jun-14	EL	1	Megalops cyprinoides	1	0
FRUSFC	03-Jun-14	EL	1	Melanotaenia nigrans	1	0
FRUSFC	03-Jun-14	EL	1	Melanotaenia splendida inornata	1	0
FRUSFC	03-Jun-14	EL	1	Hephaestus fuliginosus	1	0
FRUSFC	03-Jun-14	EL	1	Ophisternon gutturale	1	0
FRUSFC	04-Jun-14	LFYK	1	Craterocephalus stramineus	14	9.8
FRUSFC	04-Jun-14	LFYK	1	Macrobrachium bullatum	3	0
FRUSFC	04-Jun-14	LFYK	1	Megalops cyprinoides	2	235.6
FRUSFC	04-Jun-14	LFYK	1	Macrobrachium sp 3	1	0
FRUSFC	04-Jun-14	LFYK	2	Glossogobius species 2.	1	4.6
FRUSFC	04-Jun-14	LFYK	2	Melanotaenia splendida inornata	1	4.4
FRUSFC	04-Jun-14	LFYK	2	Craterocephalus stramineus	1	1.6
FRUSMB	21-May-14	1.5F	1	Nematalosa erebi	1	54

site	date	method	method_replicate	Sp_name	Abundance_raw	Biomass_raw
FRUSMB	21-May-14	1.5F	1	Lates calcarifer	2	428
FRUSMB	21-May-14	1.5F	1	Megalops cyprinoides	4	564
FRUSMB	21-May-14	1.5F	1	Amniaataba percoides	6	158
FRUSMB	21-May-14	1.5S	1	Amniaataba percoides	1	22
FRUSMB	21-May-14	1.5S	1	Megalops cyprinoides	2	70
FRUSMB	21-May-14	1.5S	1	Syncomistes butleri	2	100.4
FRUSMB	21-May-14	1.5S	1	Nematalosa erebi	3	128
FRUSMB	21-May-14	1F L	1	Ambassis macleayi	1.6	9.4
FRUSMB	21-May-14	1F L	1	Melanotaenia splendida inornata	1.6	11.9
FRUSMB	21-May-14	1F L	1	Amniaataba percoides	6.5	74.8
FRUSMB	21-May-14	1S L	1	Ambassis macleayi	1.6	9.3
FRUSMB	21-May-14	1S L	1	Nematalosa erebi	1.6	26.8
FRUSMB	21-May-14	1S L	1	Amniaataba percoides	19.5	190.9
FRUSMB	21-May-14	2F L	1	Megalops cyprinoides	2.6	302.9
FRUSMB	21-May-14	2S L	1	Megalops cyprinoides	2.6	334.1
FRUSMB	21-May-14	2S L	1	Sciades paucus	2.6	130.2
FRUSMB	21-May-14	2S L	1	Toxotes chatareus	2.6	118.8
FRUSMB	21-May-14	2S L	1	Neosilurus hyrtlii	7.8	203.1
FRUSMB	21-May-14	3F	1	Neosilurus hyrtlii	5	1868
FRUSMB	21-May-14	3F	1	Nematalosa erebi	8	1610
FRUSMB	21-May-14	3S	1	Lates calcarifer	1	108.6
FRUSMB	21-May-14	3S	1	Oxyeleotris selhemi	1	366
FRUSMB	21-May-14	3S	1	Megalops cyprinoides	2	684
FRUSMB	21-May-14	3S	1	Nematalosa erebi	2	200
FRUSMB	21-May-14	3S	1	Syncomistes butleri	2	590
FRUSMB	21-May-14	3S	1	Neosilurus hyrtlii	4	133.4
FRUSMB	21-May-14	EL	1	Macrobrachium spinipes	8	0
FRUSMB	21-May-14	EL	1	Unidentified sp.	5	0
FRUSMB	21-May-14	EL	1	Glossogobius giurus	2	11.2
FRUSMB	21-May-14	EL	1	Melanotaenia splendida inornata	0	1
FRUSMB	22-May-14	LFYK	1	Ambassis macleayi	4	14
FRUSMB	22-May-14	LFYK	1	Oxyeleotris selhemi	1	96
FRUSMB	22-May-14	LFYK	2	Melanotaenia splendida inornata	8	10
FRUSMB	22-May-14	LFYK	2	Craterocephalus stercusmuscarum	5	3
FRUSMB	22-May-14	LFYK	2	Ambassis macleayi	2	5
FRUSMB	22-May-14	LFYK	2	Melanotaenia nigrans	1	6
FRUSMB	22-May-14	LFYK	2	Glossogobius giurus	1	4