

The NSW Commercial Fisheries Port Monitoring Program Data summary report for 2023/24

NSW Department of Primary Industries and Regional Development

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Introduction

The NSW Commercial Fisheries Port Monitoring Program is a long-term collaboration between the commercial seafood industry (fishers, regional co-operatives and the Sydney Fish Markets) and NSW DPIRD (Fisheries). Port monitoring of the landed commercial catch has been an important component of fisheries assessments and management in NSW for more than 70 years, and the time series of data generated provide considerable insight into the dynamics of the stocks and the fisheries that exploit them, far beyond what is achievable through simple logbook catch and effort data. Data on the ages and sizes of fish in the landed catch are important for robust, integrated stock assessments that support management of sustainable fisheries through harvest strategies and stock status determinations. Indicators derived from monitoring ages and sizes in the landed catch are used to make inferences about current levels of fishing pressure and relative biomass – the two requirements for the national Status of Australian Fish Stocks (SAFS) exploitation status assessments. In addition to providing essential data for stock assessment and management, the program promotes industry co-ownership of monitoring data and supports their ongoing social licence to fish.

The Port Monitoring Program directly contributes to:

- Integrated stock assessments for priority species.
- Stock status assessments (e.g. SAFS) in terms of the current composition of, and long-term changes in, the size and age compositions in landings.
- Validation of commercial logbook records.
- Information on species compositions in species complexes (e.g. the trawl whiting species, Balmain bugs, unspecified catch categories).
- Baseline data on biology (e.g. morphometric relationships such as length/weight and fork length/total length, reproductive biology, age and growth, diet etc.).
- Assessment and impact of recovery programs.
- Analyses of the impacts of management changes (e.g. changes to minimum legal lengths).
- Stakeholder engagement – DPIRD staff at co-operatives and the Sydney Fish Markets liaise with commercial fishers and co-op staff and are at the front line of communications.
- Various externally funded projects with commitments to provide data on commercial landings or collection of genetic material.
- Unplanned events – e.g. prawn white-spot monitoring.
- Assisting the commercial fishing industry to maintain a social licence to operate through transparency in operations and co-operation with government.

This data summary report is designed to be a source of information for Fisheries Resource Assessment scientists responsible for stock assessment, as well as fisheries managers, industry and interested stakeholders. Review of the performance of the program is essential to maintain confidence in the data collected and to provide an opportunity for the scientists responsible for each species to refine the sampling protocols. The report also proves transparency around expenditure from the Commercial Trust that funds the operating budget and salaries of casual staff.

Methods

The NSW Commercial Fisheries Port Monitoring Program is a collaboration between industry and government. The Sydney Fish Markets and various key places of landing (including the Ballina, Iluka, Maclean, Coffs Harbour, Newcastle and Nelson Bay Fishermen's Co-operatives) allow DPIRD-Fisheries monitoring staff access to landed catches prior to being sold.

The port monitoring program utilizes a spatially and temporally stratified sampling design in order to generate representative estimates of the landed commercial catch. The base units of sampling are generally monthly and commercial fishing reporting zone; however, these may vary depending on advice from fisheries scientists primarily responsible for the assessment (species' leads) and/or management. Sampling protocols are established for each species to optimize the likelihood that representative samples of the landed catch are obtained from a port (fishing reporting zone) on each day sampled. The number of days sampled each month and area may differ between species and are based upon advice from each species' lead within the Resource Assessment Unit, as well as the dynamics of the fishery and the capacity of the program.

The relative importance of landings from each month/fishing zone are dependent upon the reported commercial landings provided by the commercial fishing logbooks. These data are used to reweight and combine the sampled length frequency data in each base unit of sampling (e.g., month/fishing zone) in order to provide estimates that are representative of the entire fishing fleet in NSW. The Department has developed efficient computing applications to automate these processes. The project has also moved largely to electronic data collection. Electronic measuring boards have made data available in real time and largely removed the need for paper-based records and the associated data entry expense and potential data entry errors.

Process for selection of species to monitor

Species to be included in the port monitoring program are selected each year through a rigorous process involving all DPIRD-Fisheries stock assessment scientists. The process utilizes the Species Priority List (SPL) for Resource Assessment (see Appendix B) to rank species of relative importance, followed by the Data and Monitoring Plan (DMP) to rank species for which port monitoring has been identified as being important for assessment purposes. Within the DMP, the requirements of a port monitoring program for each species under a base case scenario required to inform a reliable assessment are also identified and ranked. These requirements being potentially biology, length composition and/or age composition. Following the identification and ranking of species requiring port monitoring the list is sent to all relevant assessment scientists who are designated 'leads' for each species for their recommendations. This is an important step in the process as both the DMP and SPL have remained static, and the SPL was not designed specifically to be used for port monitoring. Under an environment limited by resources it may not be suitable to rely on the SPL as being totally prescriptive. Species leads may also be aware of other programs collecting similar data, therefore allowing the group to make more balanced and practical decisions on allocation of port monitoring resources to species.

Generally, between 10 and 15 species are monitored for length compositions each year, with the numbers being dictated by sampling designs, sampling logistics and the resources available. In addition, a few (generally between 5 and 8) species are sampled for age composition. Port

monitoring staff assess the feasibility of successfully sampling each identified species based on the temporal and spatial distribution of the fishery, the operations of the fleet including where they land catches, and the resourcing of the program.

Fish assessed for age are purchased directly from either the Fishermen's co-operative or the Sydney Fish Markets. Where it is considered cost-effective (e.g. for high value species such as large Snapper and Mulloway), the fish have their otoliths removed and are resold to recoup costs.

Details of the prioritisation and justification, sampling aims, reported landings and sampling data for 2023/24 are presented below for each species separately. Stock status is based on the most recent SAFS reports (<https://fish.gov.au/>). A brief commentary on how well the sampling met the aims is provided for each species.

Australian Bonito

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
Commonwealth, New South Wales, Queensland	Eastern Australia	Sustainable	Depletion estimates, Catch, Catch rates, Size composition, Mortality rates

Prioritization and justification

Species Priority Ranking for 2023/24: 45

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring 26

Base case port monitoring required to inform a reliable assessment:

Rank for biology – not required

Rank for lengths – 20

Rank for ages – not required

Species Priority Ranking for 2023/24: 45

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring 26

Base case port monitoring required to inform a reliable assessment:

Rank for biology – not required

Rank for lengths – 20

Rank for ages – not required

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial landed catch for NSW.

Sampling design

Length frequency data were collected through Coffs Harbour Fishermen's Co-Operatives and the Sydney Fish Markets. For each location, all catches from a selected ocean zone that were on the

floor on the day of sampling were sampled. Australian Bonito were measured from the tip of the nose to fork length (nearest cm rounding down).

Australian Bonito sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Almost all Australian Bonito catches are graded, generally into XL, L, M, S or U. All grades are sampled from a catch. Approximately 10 times the number of size classes per grade are measured. These sub-samples are weighed, the total weight of each grade recorded, and the sample scaled up accordingly, using the PISCES software.

Results

Table 1. Reported landings (kg) heat map of Australian Bonito by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value
Zone 2														
Zone 3														100%
Zone 4														
Zone 5														75%
Zone 6														
Zone 7														50%
Zone 8														
Zone 9														25%
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													397376	

Table 2. The number of days sampled for Australian Bonito by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3	1	5	7	7	6	6	5				1		38
Zone 4				1					1				2
Zone 5	4	5	5	1	1	1	3	4	1	2	1		28
Zone 6	3	4	6	2	3	4	3	3	3	3	4	1	39
Zone 7							1	1	3	2	1	4	12
Zone 8							1		1				2
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	8	14	18	11	10	11	13	8	9	7	7	5	121
Total	8	14	18	11	10	11	13	8	9	7	7	5	121

Table 3. The number of catches sampled for Australian Bonito by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3	1	6	9	13	11	7	5				1		53
Zone 4				1					1				2
Zone 5	5	5	6	1	1	3	5	6	1	2	1		36
Zone 6	3	4	6	2	3	8	5	4	5	4	4	3	51
Zone 7							1	1	5	2	1	5	15
Zone 8							1		1				2
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	9	15	21	17	15	18	17	11	13	8	7	8	159
Total	9	15	21	17	15	18	17	11	13	8	7	8	159

Table 4. The number of Australian Bonito sampled by month and area during 2023/24. The shaded heat map represents the reported commercial landing.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3	91	552	678	1064	539	558	400				6		3888
Zone 4				95					141				236
Zone 5	301	533	551	112	25	188	457	670	173	89	29		3128
Zone 6	187	141	310	160	68	385	508	765	647	220	179	116	3686
Zone 7							14	118	47	76	9	214	478
Zone 8							84		26				110
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	579	1226	1539	1431	632	1131	1463	1553	1034	385	223	330	11526
Total	579	1226	1539	1431	632	1131	1463	1553	1034	385	223	330	11526

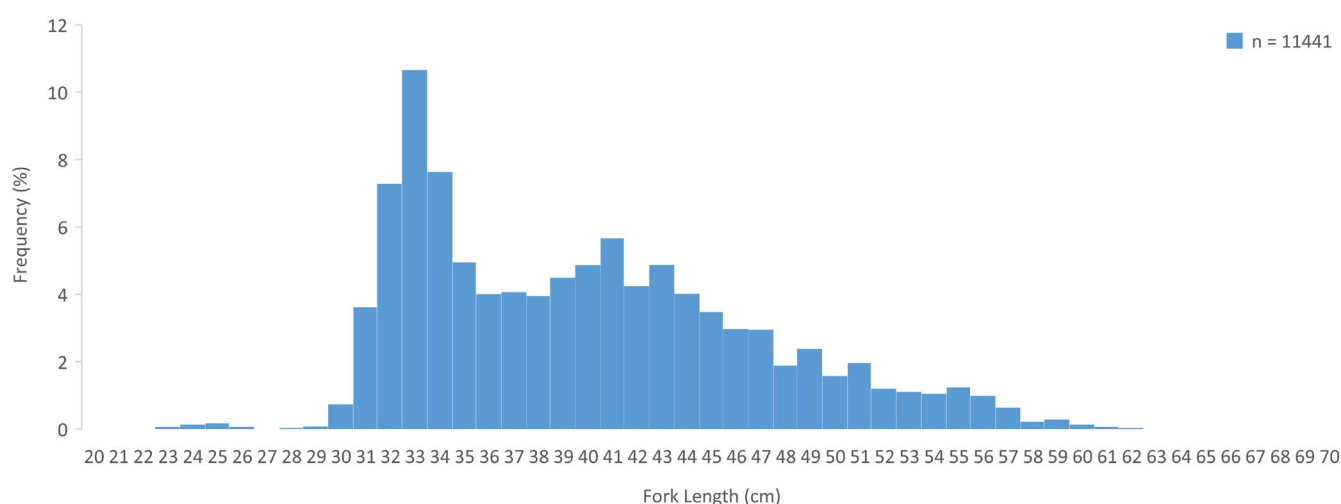


Figure 1. Length composition of Australian Bonito sampled through the Port Monitoring program during 2023/24. Australian Bonito landings were sampled and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create the figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

Sampling at the Sydney Fish Markets and Coffs Harbour co-op largely captured the peak times and areas for landings. Comprehensive sampling of Australian Bonito was achieved during 2023/24.

Bluespotted Flathead

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	Eastern Australia	Sustainable	Catch, effort, standardised CPUE, length and age compositions, biomass depletion and harvest rate estimates

Prioritization and justification

Species Priority Ranking for 2023/24: **3**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring: **2**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **2**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the NSW commercial fishery.

Sampling design

Length frequency data were collected through the Clarence River (Maclean and Iluka) and Coffs Harbour Fishermen's Co-Operatives and the Sydney Fish Markets. For each location, all catches from a selected ocean zone that were on the floor on the day of sampling were required to be sampled. Bluespotted Flathead were measured from the tip of the nose to total length (nearest cm rounding down).

Bluespotted Flathead sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Almost all Bluespotted Flathead catches are graded, generally into XL, L, M, S or U. All grades are sampled from a catch. Approximately 10 times the number of size classes per grade are measured (as tallied by the electronic measuring board software). These sub-samples are weighed, the total weight of each grade recorded, and the sample scaled up accordingly, using the PISCES software.

Results

Table 5. Reported landings (kg) heat map of Bluespotted Flathead by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend Percent of Max Value
Ocean Zone/EG Region														
Zone 1														100% 75% 50% 25%
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													61950	

Table 6. The number of days sampled for Bluespotted Flathead by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2	3	5	7	3	6	4	3	5	2	3	2	5	48
Zone 3	3	3	3		5	4	7	4	1	2	6	6	44
Zone 4	1												1
Zone 5	4	4	1	1	1	1	1	1	3	4		2	23
Zone 6		3											3
Zone 7			2		1					1			4
Zone 8	1	1							1		1		4
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5						1							1
EG Region 6													
EG Region 7													
Total (area known)	12	16	13	4	13	10	11	10	7	10	9	13	128
Total	12	16	13	4	13	10	11	10	7	10	9	13	128

Table 7. The number of catches sampled for Bluespotted Flathead by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2	4	11	9	5	7	7	3	6	2	4	2	6	66
Zone 3	7	6	8		7	4	8	4	1	2	10	14	71
Zone 4	1												1
Zone 5	6	5	1	1	1	1	1	1	3	4		3	27
Zone 6		4											4
Zone 7			2		1					1			4
Zone 8	1	1							1		1		4
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5						1							1
EG Region 6													
EG Region 7													
Total (area known)	19	27	20	6	16	13	12	11	7	11	13	23	178
Total	19	27	20	6	16	13	12	11	7	11	13	23	178

Table 8. The number of fish sampled for Bluespotted Flathead by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2	391	389	440	157	334	345	84	194	31	100	16	335	2816
Zone 3	352	125	191		342	224	203	89	6	57	164	404	2157
Zone 4	37												37
Zone 5	376	531	133	52	27	42	99	132	97	789		531	2809
Zone 6		265											265
Zone 7			381		114					198			693
Zone 8	122	180							11		141		454
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5						12							12
EG Region 6													
EG Region 7													
Total (area known)	1278	1490	1145	209	817	623	386	415	145	1144	321	1270	9243
Total	1278	1490	1145	209	817	623	386	415	145	1144	321	1270	9243

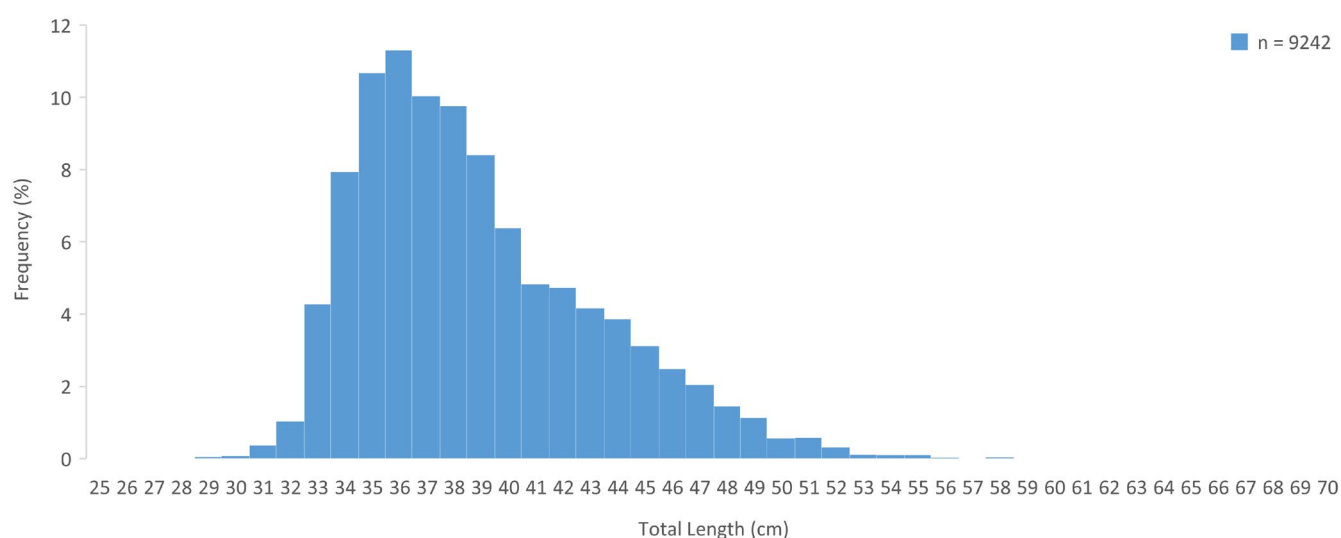


Figure 2. Length composition of Bluespotted Flathead landed by the commercial fishery during 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

Comprehensive sampling of Bluespotted Flathead was achieved during 2023/24. Greater sampling of fish from ocean zone 8 during December and January would have improved alignment with the operation of the fishery.

Balmain and Smooth Bug

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales, Queensland	East Coast	Sustainable	Catch rates, catch, effort, size structure, risk assessment

Prioritization and justification

Species Priority Ranking for 2023/24: **47**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **27**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths – **21**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size and species composition data that are representative of the NSW commercial fishery.

Sampling design

Opportunistic length frequency data were collected from the Ballina, Clarence River (Maclean) and Coffs Harbour Fishermen's Co-Operatives as well as the Sydney Fish Markets. Balmain/Smooth Bugs were measured for carapace length: a straight line from the base of the eye socket to the centre of the posterior margin of the carapace (i.e. the back of the carapace) as shown in Figure 3. Carapace length is measured to the nearest whole millimetre below the true length.



Figure 3. Balmain bug (*Ibacus peronii*) being measured with calipers.

Sampling graded catches

Balmain/Smooth Bug catches are generally ungraded; however, if grading occurs then all grades are sampled.

Results

Table 9. Reported landings heat map of Balmain Bug by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value
Zone 1														
Zone 2														100%
Zone 3														
Zone 4														
Zone 5														
Zone 6														75%
Zone 7														
Zone 8														
Zone 9														
Zone 10														50%
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														25%
EG Region 6														
EG Region 7														
Total													48166	

Table 10. The number of days sampled for Balmain Bug by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1					1			2					3
Zone 2					1				1	1			3
Zone 3					1	2	4	2	1	1	1		12
Zone 4													
Zone 5													1
Zone 6		1						1					2
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	1	0	0	3	2	4	6	2	2	1	0	21
Total	0	1	0	0	3	2	4	6	2	2	1	0	21

Table 11. The number of catches sampled for Balmain Bug by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1					1			2					3
Zone 2					1				1	1			3
Zone 3					1	2	6	2	1	1	1		14
Zone 4													
Zone 5													
Zone 6		1						1					2
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	1	0	0	3	2	6	6	2	2	1	0	23
Total	0	1	0	0	3	2	6	6	2	2	1	0	23

Table 12. The number of Balmain Bug sampled by month and area during 2023/24. The shaded heat map represents the reported commercial landing

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1					4			3					7
Zone 2					1				1	8			10
Zone 3					1	16	35	16	6	30	1		105
Zone 4													
Zone 5													
Zone 6		69						7					76
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	69	0	0	6	16	35	26	7	38	1	0	198
Total	0	69	0	0	6	16	35	26	7	38	1	0	198

Table 13. Reported landings heat map of Smooth Bug by month and area during 2023/24

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value
Zone 1														100%
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													25.5	0%

Table 14. The number of days sampled for Smooth Bug by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1	2	4			1	1		4	1				13
Zone 2	3	2	5	3	6	2	2	2	1	4	2	3	35
Zone 3	3	4	3		3	2	6	5	4	2	6	1	39
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	8	10	8	3	10	5	8	11	6	6	8	4	87
Total	8	10	8	3	10	5	8	11	6	6	8	4	87

Table 15. The number of catches sampled for Smooth Bug by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1	2	4			1	1		5	1				14
Zone 2	5	3	7	4	11	3	2	3	1	4	2	3	48
Zone 3	5	6	6		6	3	11	7	5	3	12	3	67
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	12	13	13	4	18	7	13	15	7	7	14	6	129
Total	12	13	13	4	18	7	13	15	7	7	14	6	129

Table 16. The number of Smooth Bug sampled by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1	140	329			101	120		368	120				1178
Zone 2	291	209	675	376	869	274	152	309	147	369	259	311	4241
Zone 3	415	376	233		266	147	467	403	248	186	727	122	3590
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	846	914	908	376	1236	541	619	1080	515	555	986	433	9009
Total	846	914	908	376	1236	541	619	1080	515	555	986	433	9009

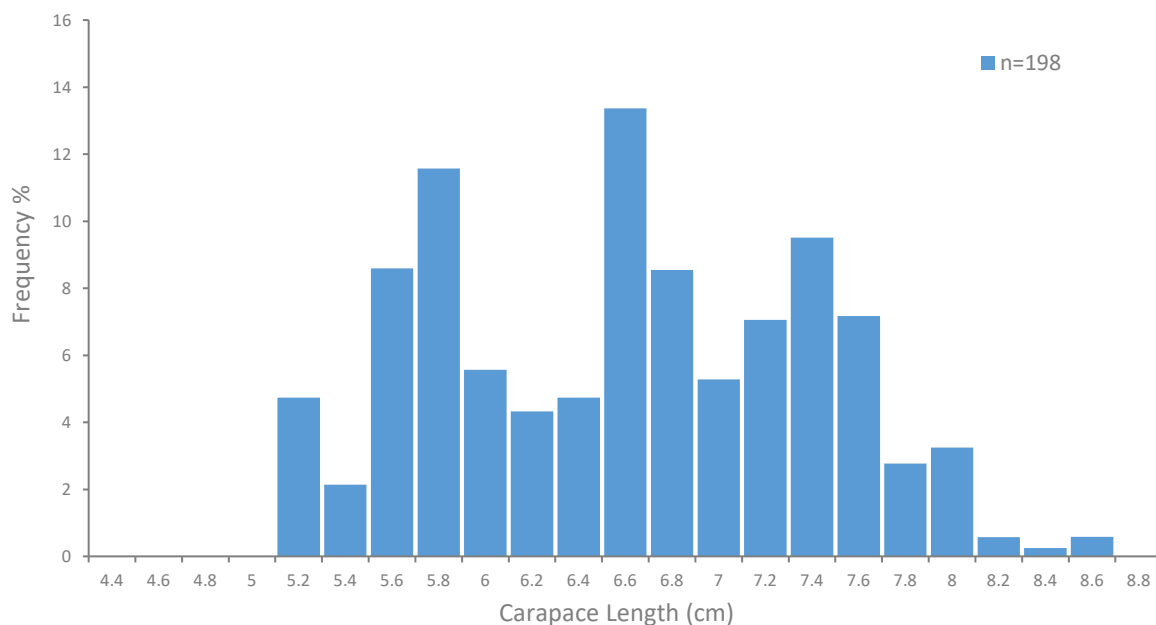


Figure 4. Length composition of Balmain Bugs sampled through the Port Monitoring program during 2023/24. Balmain Bug landings were sampled and combined according to the reported commercial landings in each sampling strata using the software PISCES.

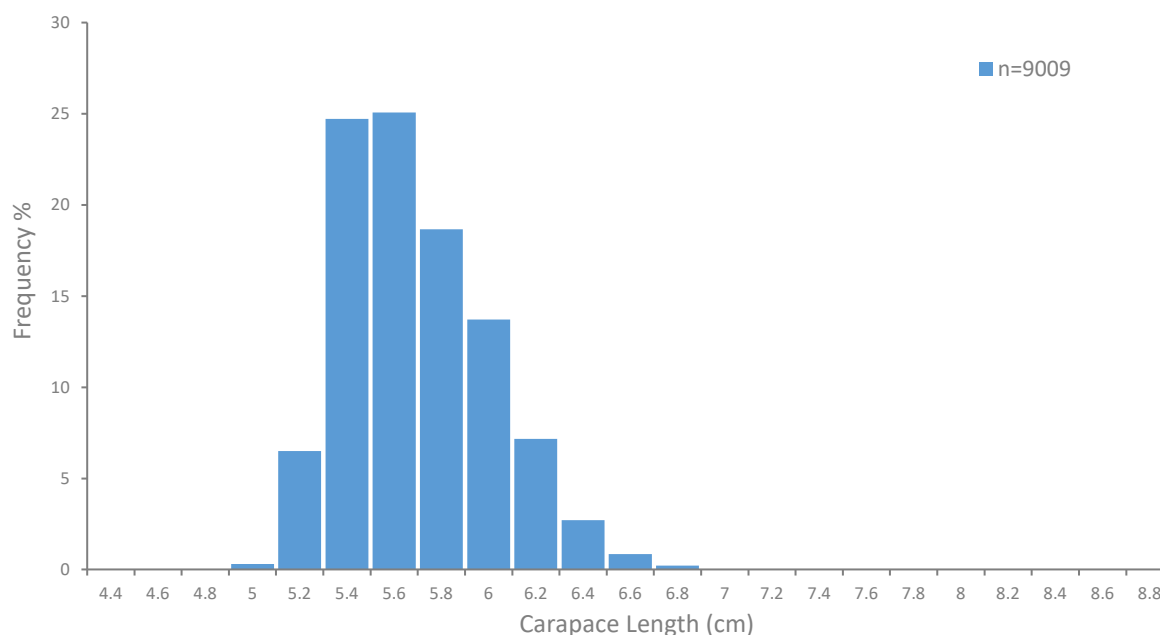


Figure 5. Length composition of Smooth Bugs sampled through the Port Monitoring program during 2023/24. Smooth Bug landings were sampled and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Species Composition

Smooth Bugs were the dominant species in the northern zones and Balmain Bugs dominated landings from the more southern zones. The overall percentage of the ‘bug’ catch was 16.7% Balmain Bugs and 83.3% Smooth Bugs (Table 9). These species compositions differed vastly from those reported in commercial logbooks, in which almost all Bugs were reported as being Balmain Bugs.

Table 17. The relative weights of Balmain Bugs and Smooth Bugs sampled within each ocean zone during port monitoring in 2023/24, compared with the relative reported weights in commercial fishing logbooks.

Ocean Zone	% Observed in Port Monitoring		% Reported in Logbooks	
	Balmain	Smooth	Balmain	Smooth
1	1.1	98.9	99.9	0.1
2	0.4	99.6	100	0
3	4.1	95.9	100	0
4			100	0
5			100	0
6	100	0	100	0
7			98	2
8			100	0
9			100	0
10			100	0
All Zones	3.10%	96.90%	99.90%	0.10%

Commentary

Comprehensive sampling of 'bugs' was achieved during 2023/24. The species reporting issues identified are substantial and need to be addressed in future.

Eastern King Prawn

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales, Queensland	Eastern Australia	Sustainable	Biomass; catch, effort and CPUE relative to MSY reference points, Stock Assessment

Prioritization and justification

Species Priority Ranking for 2023/24: 15

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring: **8**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **6**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial offshore trawl landed catch for NSW.

Sampling design

Length Frequency data from the Ocean Prawn Trawl Fishery were collected through the Ballina, Clarence River (Maclean and Iluka) and Coffs Harbour Fishermen's Co-Operatives. For each location, sampling 2-3 catches per day was attempted. Eastern King Prawns were sexed and measured for carapace length: a straight line from the base of the eye socket to the centre of the posterior margin of the carapace (i.e. the back of the carapace) as shown in Figure 4. Carapace length is measured in millimetres (mm).

Eastern King Prawn sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

All Eastern King Prawn catches are graded, generally into Jumbo, XL, L, M, S/M or S. All grades are sampled; at least 50 prawns from each grade.

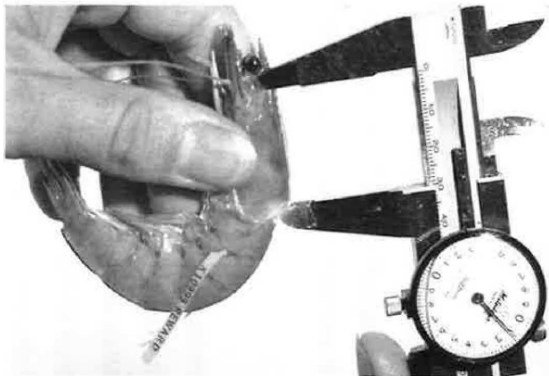


Figure 6. Carapace length of a prawn being measured using callipers. Note the locations of the calliper jaws at the back of the eye socket and back of the carapace.

Results

Table 18. Reported landings (kg) heat map of Eastern King Prawn by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value 100% 75% 50% 25%
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													737998	

Table 19. The number of days sampled for Eastern King Prawn by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1	3	5			1	3		5	1				18
Zone 2	3	5	3	4	4	4	3	5	4	3	2	3	43
Zone 3	3	3	3		5	5	3	4	4	3	4	3	40
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	9	13	6	4	10	12	6	14	9	6	6	6	101
Total	9	13	6	4	10	12	6	14	9	6	6	6	101

Table 20. The number of catches sampled for Eastern King Prawn by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1	3	6			2	7		9	1				28
Zone 2	3	6	6	4	5	6	5	7	6	6	4	4	62
Zone 3	6	6	6		6	10	6	5	6	5	7	6	69
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	12	18	12	4	13	23	11	21	13	11	11	10	159
Total	12	18	12	4	13	23	11	21	13	11	11	10	159

Table 21. The number of individuals sampled for Eastern King Prawn by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1	247	550			150	514		723	100				2284
Zone 2	440	900	900	600	750	950	700	1050	950	900	650	600	9390
Zone 3	900	900	950		900	1500	900	750	850	800	1049	925	10424
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1587	2350	1850	600	1800	2964	1600	2523	1900	1700	1699	1525	22098
Total	1587	2350	1850	600	1800	2964	1600	2523	1900	1700	1699	1525	22098

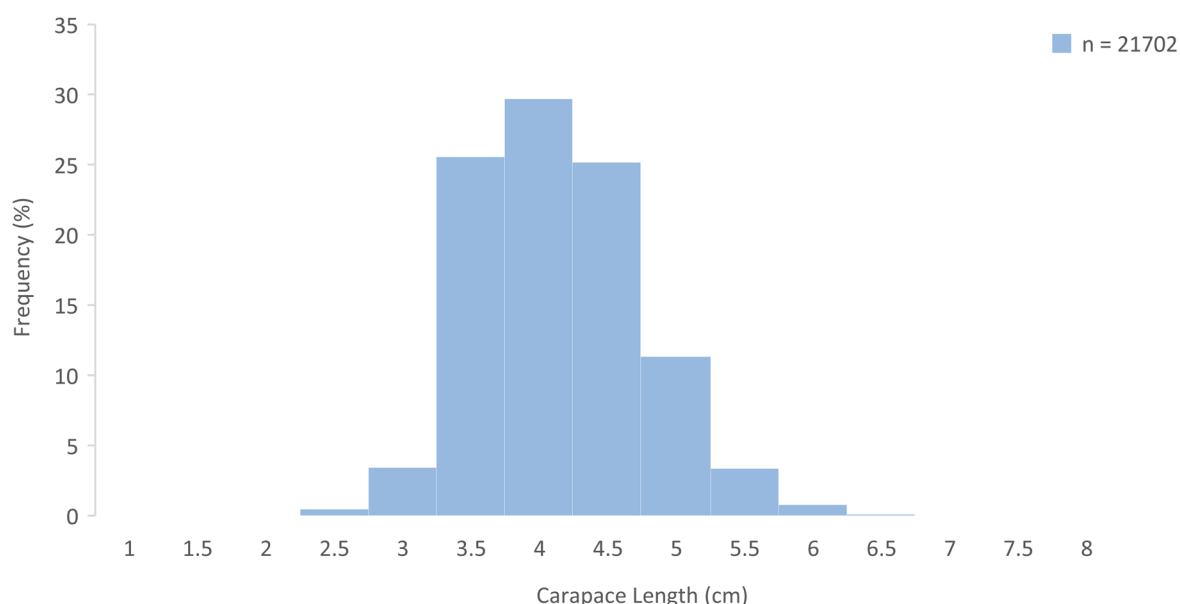


Figure 7. Length composition of Eastern King Prawn landed by the offshore trawl commercial fishery for 2023/24. Prawns were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

As per previous years, the target number of catches measured per sampling day proved to be unfeasible for most co-ops. Commonly catches had up to 5 or 6 different grades and needed to move quickly through the co-op process for transport; this made sampling multiple catches per day difficult. Future sampling may need to be modified to account for these logistical issues.

Eastern School Prawn

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	New South Wales	Sustainable	Catch, effort, standardised catch rate, environmental models

Prioritization and justification

Species Priority Ranking for 2023/24: 22

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring: **13**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **10**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial landed catch in key areas of NSW.

Sampling design

Length Frequency data from the Estuary General Fishery, Estuarine Prawn Trawl Fishery and Ocean Trawl Fishery were collected through the Clarence River (Maclean) Fishermen's Co-Operative and the Sydney Fish Markets. Sampling primarily focused on the Clarence River, Tuggerah Lakes and Hawkesbury River. For each location, sampling 2-3 catches per day was attempted. School Prawns were sexed and measured for carapace length: a straight line from the base of the eye socket to the centre of the posterior margin of the carapace (i.e. the back of the carapace) as shown in Figure 8. Carapace length is measured in millimetres (mm).

School Prawn sampling is based on month, estuary region and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

All Eastern School Prawn catches are graded, generally into XL, L or U. All grades are sampled; at least 50 prawns from each grade.

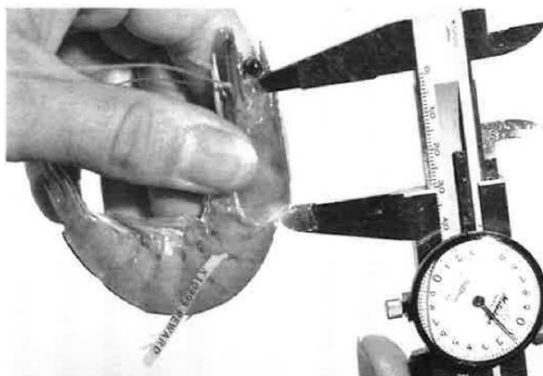


Figure 8. Carapace length of a prawn being measured using callipers. Note the locations of the calliper jaws at the back of the eye socket and back of the carapace.

Results

Table 22. Reported landings (kg) heat map of Eastern School Prawn by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value
Zone 2														
Zone 3														100%
Zone 4														
Zone 5														75%
Zone 6														
Zone 7														50%
Zone 8														
Zone 9														25%
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													324516	

Table 23. The number of days sampled for Eastern School Prawn by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1									1				1
Zone 2	1	1		1	1						1		5
Zone 3					1	1		1					3
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2					1	2	4	4	3	2	3	1	20
EG Region 3						1							1
EG Region 4				1	4	5	4	5	3	3	2		27
EG Region 5			3	4	3	3	4	5	3	3	2		30
EG Region 6													
EG Region 7													
Total (area known)	1	1	3	6	10	12	12	15	10	8	8	1	87
Total	1	1	3	6	10	12	12	15	10	8	8	1	87

Table 24. The number of catches sampled for Eastern School Prawn by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1									1				1
Zone 2	1	1		2	1						2		7
Zone 3					1	1		1					3
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2					1	3	6	6	5	3	4	1	29
EG Region 3						1							1
EG Region 4				3	10	7	9	7	6	4	4		50
EG Region 5			4	8	5	5	6	7	4	7	6		50
EG Region 6													
EG Region 7													
Total (area known)	1	1	4	12	18	16	21	21	16	14	16	1	141
Total	1	1	4	12	18	16	21	21	16	14	16	1	141

Table 25. The number of individuals sampled for Eastern School Prawn by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1									50				50
Zone 2	150	100		300	145						145		840
Zone 3					150	150		150					450
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2					109	410	692	697	571	367	503	123	3472
EG Region 3						104							104
EG Region 4				216	1211	463	1099	1007	950	584	553		6083
EG Region 5			579	970	680	408	561	1051	662	808	765		6484
EG Region 6													
EG Region 7													
Total (area known)	150	100	579	1486	2295	1535	2352	2905	2233	1759	1966	123	17483
Total	150	100	579	1486	2295	1535	2352	2905	2233	1759	1966	123	17483

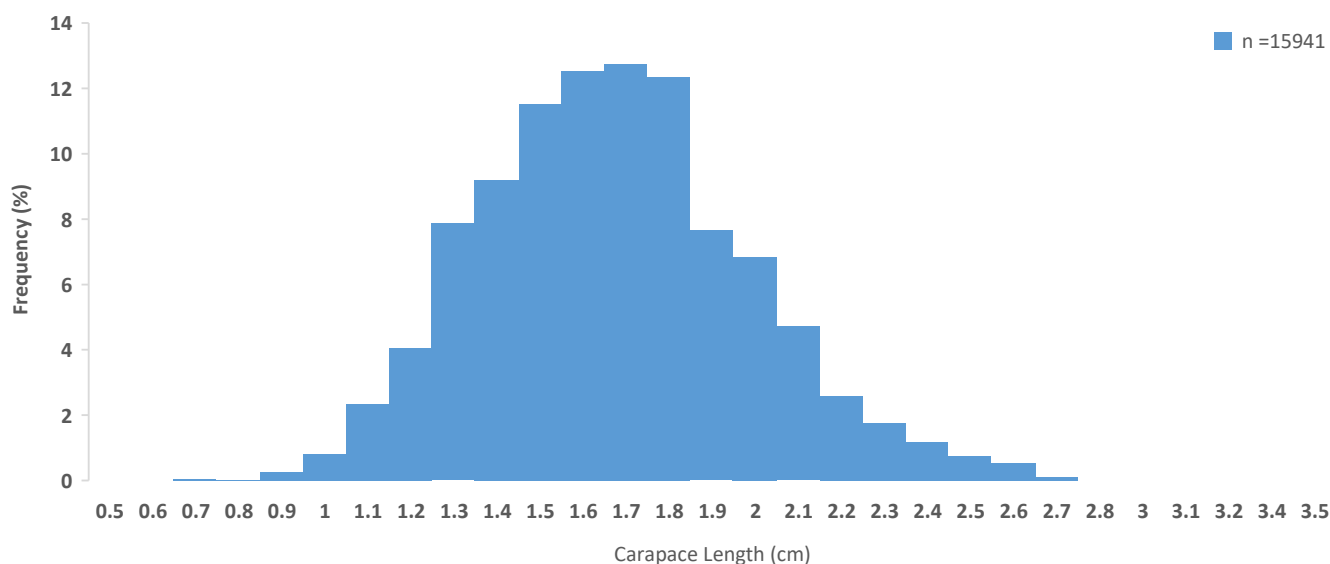


Figure 9. Length composition of Eastern School Prawn landed by the commercial fishery for 2023/24. Prawns were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

Sampling generally reflected the spatial and temporal distribution of the landings and resulted in a robust length sample.

Eastern Sea Garfish

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	Eastern Australia	Sustainable	Spawning stock biomass, fishing mortality rate, age composition, catch, effort

Prioritization and justification

Species Priority Ranking for 2023/24: **26**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **17**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **13**

Rank for ages – **7**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial landed catch for NSW.

Sampling design

Most sampling is done at the Sydney Fish Markets; however, some sampling is done at the Forster boat ramp and a fisher's processing shed near Forster. Sampling instructions sent to field staff are in Figure 8. Sea Garfish are measured from the lower jaw to fork length to the nearest cm rounding down. Both the Ocean Hauling and Estuary General Fisheries are monitored.

Twenty Sea Garfish per catch were purchased for ageing. Fish were selected from each grade in the approximate ratio of each grade in the total catch by weight.

Sea Garfish sampling is based on monthly and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Almost all Sea Garfish catches are graded, generally into XL, L, M, S or U. All grades are sampled during a sampling event. Approximately 10 times the number of size classes per grade are measured (as tallied by the electronic measuring board software). These sub-samples are weighed, the total weight of each grade recorded, and the sample scaled up accordingly using the PISCES software.

Sea Garfish (*Hyporhamphus australis*)

Sample days

- Opportunistically up to 4 days per month

Lengths required

- Sea garfish are almost always graded by size. Sample from **each grade 80-100 fish** (approx. 3-10kgs depending on size). Make sure you weigh the sub-sample taken from each grade. If whole catch is ungraded then only need to do one sample of 80-100 length measurements
- Measure catches as fork length (FL - from the tip of the top jaw to the fork in the tail – see figure below) to the nearest whole cm below true length.
- You will need to record the total catch weight, total weight of each size grade and the total weight of the fish measured from each size grade.
- Try and measure from as many different fishermen as time allows.

Otoliths required

20 otoliths per catch taken proportionately from each grade. Collect otoliths from 2 catches per month; 40 otoliths in total per month.

Field code **NB-Ha 1**

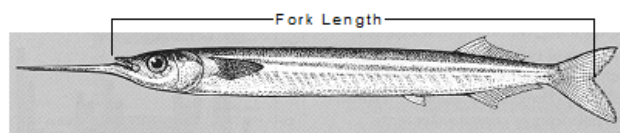


Figure 10. Sea Garfish sampling instructions for field staff.

Results

Table 26. Reported landings (kg) heat map of Eastern Sea Garfish by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value
Zone 1														
Zone 2														100%
Zone 3														
Zone 4														75%
Zone 5														
Zone 6														50%
Zone 7														
Zone 8														25%
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													32544	

Table 27. The number of days sampled for Eastern Sea Garfish by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5	1		1				1	7	9	5	2	1	27
Zone 6													
Zone 7							1	1					2
Zone 8													
Zone 9													
Zone 10									1				1
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4								1	2				3
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1	0	1	0	0	0	2	9	12	5	2	1	33
Total	1	0	1	0	0	0	2	10	12	5	2	1	34

Table 28. The number of catches sampled for Eastern Sea Garfish by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5	1		1				1	7	9	6	2	1	28
Zone 6													
Zone 7							1	1					2
Zone 8													
Zone 9													
Zone 10									1				1
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4								1	5				6
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1	0	1	0	0	0	2	9	15	6	2	1	37
Total	1	0	1	0	0	0	2	10	15	6	2	1	38

Table 29. The number of fish sampled for Eastern Sea Garfish by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5	122		310				103	694	904	654	300	61	3148
Zone 6													
Zone 7							210	230					440
Zone 8													
Zone 9													
Zone 10									162				162
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4								231	832				1063
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	122	0	310	0	0	0	313	1155	1898	654	300	61	4813
Total	122	0	310	0	0	0	313	1305	1898	654	300	61	4963

Table 30. The number of fish sampled for ageing Eastern Sea Garfish by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5			20				20	144	180	120	60	20	564
Zone 6													
Zone 7							20	20					40
Zone 8													
Zone 9													
Zone 10									40				40
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4									60				60
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	0	20	0	0	0	40	164	280	120	60	20	704
Total	0	0	20	0	0	0	40	184	280	120	60	20	724

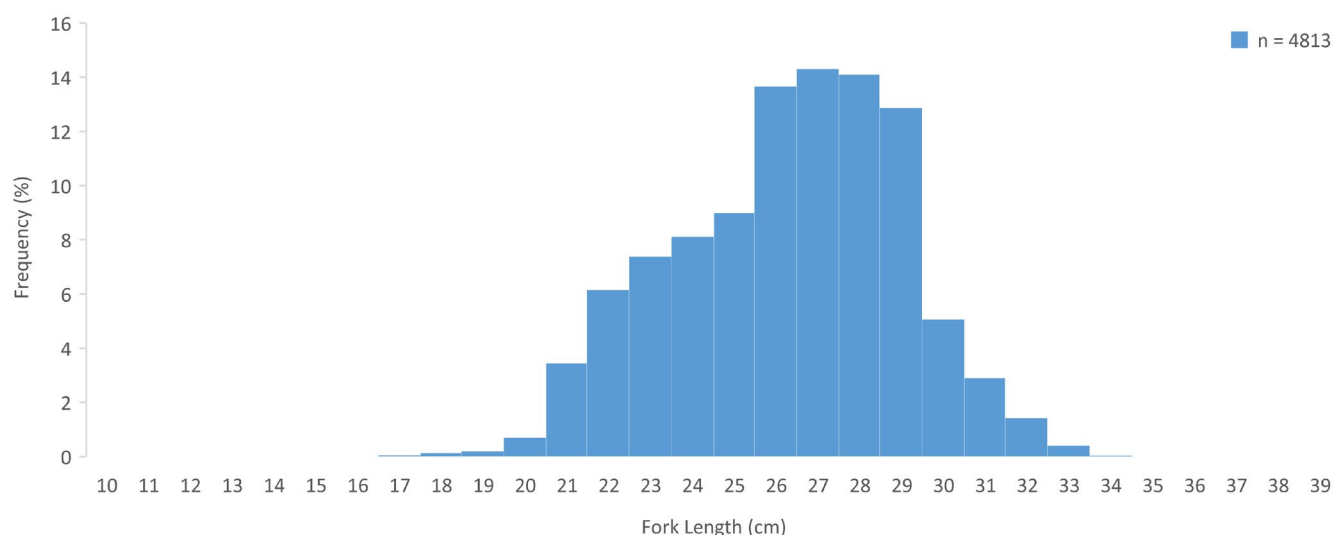


Figure 11. Length composition of Eastern Sea Garfish landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Commentary

Comprehensive sampling of Sea Garfish was achieved during 2023/24, generally reflecting the spatial and temporal operations of the fishery, with the exception of fish from ocean zone 10. Sea Garfish from ocean zone 10 are sometimes sent to Melbourne for marketing, making them unavailable to sample through the current port monitoring program.

Giant Mud Crab

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	Estuary General Fishery	Sustainable	Catch, catch rate, biomass, fishing mortality

Prioritization and justification

Species Priority Ranking for 2023/24: 16

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring 9

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - 7

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial landed catch from the Clarence River and Coffs Harbour Fishermen's Co-ops.

Sampling design

Length frequency data were collected through the Clarence River (Maclean) and Coffs Harbour Fishermen's Co-Operatives. Giant Mud Crab were measured as carapace length (CL) to the nearest mm, rounding down, and all crabs on the floor on the day of sampling were measured unless the catch exceeded 50 individuals in which case sub-sampling was done. A separate length frequency was recorded for each sex and stage of maturity. The breakdown of quality grade (A, B or C) by weight was also recorded for each catch sampled.

Sampling is based on month and estuary region strata for data expansion using reported commercial landings for each month and estuary region. These expansions are done using the PISCES software.

Sampling graded catches

Giant Mud Crab catches are graded according to their size and density. All grades are sampled during a sampling event.

Results

Table 31. Reported landings (kg) heat map of Giant Mud Crab by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value 100% 75% 50% 25%
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													159184	

Table 32. The number of days sampled for Giant Mud Crab by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	2	2	1	2	2	2	2	3	3	3	2	1	25
EG Region 3	2	1	4	2	4	2	3	3	4	2	4	2	33
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	4	3	5	4	6	4	5	6	7	5	6	3	58
Total	4	3	5	4	6	4	5	6	7	5	6	3	58

Table 33. The number of catches sampled for Giant Mud Crab by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	4	4	2	2	9	5	3	6	4	4	3	1	47
EG Region 3	3	1	6	3	13	7	7	5	6	4	5	6	66
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	7	5	8	5	22	12	10	11	10	8	8	7	113
Total	7	5	8	5	22	12	10	11	10	8	8	7	113

Table 34. The number of Giant Mud Crabs sampled by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	22	20	23	16	322	164	275	448	353	413	225	49	2330
EG Region 3	104	40	147	44	327	264	352	262	468	359	333	291	2991
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	126	60	170	60	649	428	627	710	821	772	558	340	5321
Total	126	60	170	60	649	428	627	710	821	772	558	340	5321

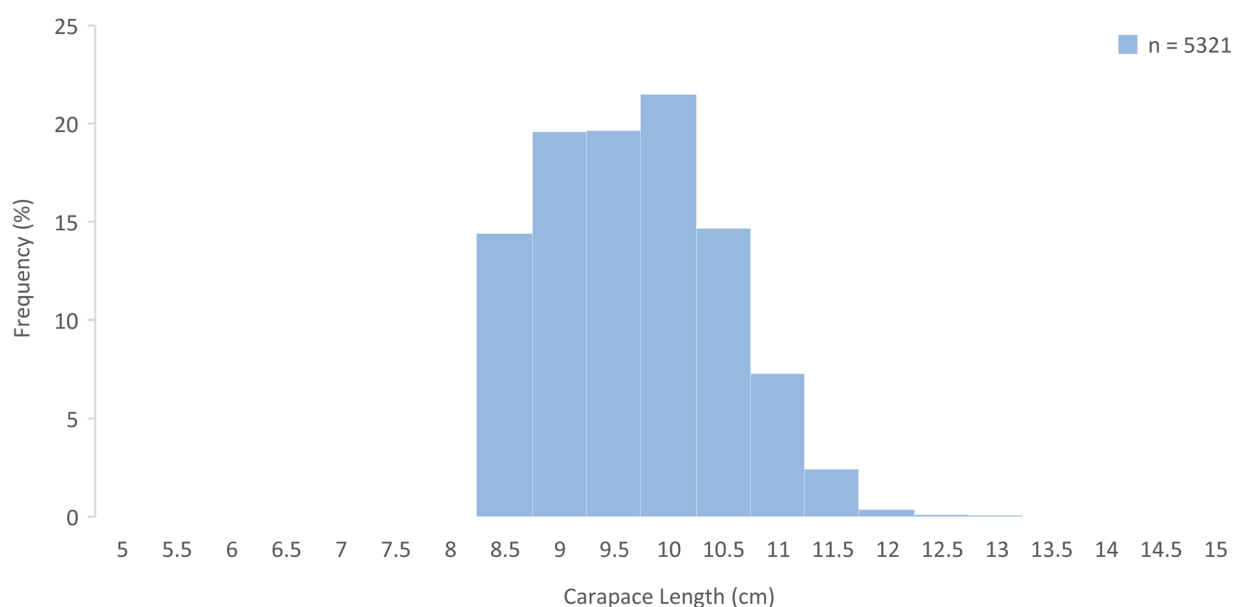


Figure 12. Length composition of Giant Mud Crab landed by the commercial fishery for 2023/24. Crabs were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Commentary

Excellent coverage was achieved for the main fishery in regions 2 and 3; however, greater sampling in Estuary General Regions 1 and 4 would increase coverage of the fishery. Ongoing issues in accessing landings at the Wallis Lake Co-Op continues to inhibit monitoring and assessment.

Grey Morwong

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
Commonwealth, New South Wales, Queensland	Eastern Australia	Depleted	Catch, Catch rates, size structure, age structure, fishing mortality, biomass depletion

Prioritization and justification

Species Priority Ranking for 2023/24: **9**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **5**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **3**

Rank for ages – **2**

Aim of the Port Monitoring sampling for 2023/24

To collect size and age composition data that are representative of the commercial landed catch for NSW.

Sampling design

Length frequency data from the commercial fishery were collected for as many ocean zones as possible through the Clarence River (Maclean) and Coffs Harbour Fishermen's Co-Operatives and the Sydney Fish Markets. For each location, all catches from an ocean zone that were on the floor on the day of sampling were attempted to be sampled. Grey Morwong were measured from the tip of the nose to fork length (nearest cm rounding down).

Grey Morwong sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Otoliths were collected from Grey Morwong, with the aim of sampling 20 fish from Coffs Harbour as well as 2 separate catches of 15 fish from ocean zones 6 -10 each month.

Sampling graded catches

Almost all Grey Morwong catches are graded, generally into XL, L, M, S or U. All grades are sampled during a sampling event, and because catches are relatively small, all fish in each catch are usually measured.

Results

Table 35. Reported landings (kg) heat map of Grey Morwong by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value 100% 75% 50% 25% ...
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													22993	

Table 36. The number of days sampled for Grey Morwong by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			2	2	4	4	2	2	3	1	1	3	24
Zone 3	2	4	3	5	1	4	5	3	5	3	6	2	43
Zone 4													
Zone 5	2	2	2					1	2			1	10
Zone 6	2	2	2	1	6	6	3	4	6	4	3	3	42
Zone 7			1				1	1					3
Zone 8							2						2
Zone 9				1					3	1	1		6
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	6	8	10	9	11	14	13	11	19	9	11	9	130
Total	6	8	10	9	11	14	13	11	19	9	11	9	130

Table 37. The number of catches sampled for Grey Morwong by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			2	2	4	4	2	2	3	1	1	3	24
Zone 3	3	4	4	6	1	4	5	3	5	3	6	2	46
Zone 4													
Zone 5	2	4	2					1	3			1	13
Zone 6	4	4	4	3	8	9	3	4	8	6	5	6	64
Zone 7			1				1	1					3
Zone 8							2						2
Zone 9				1					3	1	1		6
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	9	12	13	12	13	17	13	11	22	11	13	12	158
Total	9	12	13	12	13	17	13	11	22	11	13	12	158

Table 38. The number of fish sampled for Grey Morwong by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			50	33	84	119	51	69	72	59	14	53	604
Zone 3	9	67	116	92	31	173	98	104	80	155	220	36	1181
Zone 4													
Zone 5	21	69	47					10	49			25	221
Zone 6	130	101	171	116	346	560	60	144	313	147	107	131	2326
Zone 7			10				11	12					33
Zone 8							73						73
Zone 9				32					57	22	25		136
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	160	237	394	273	461	852	293	339	571	383	366	245	4574
Total	160	237	394	273	461	852	293	339	571	383	366	245	4574

Table 39. The number of fish sampled for ageing Grey Morwong by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			26										26
Zone 3		34		17	23	20	17	23	20		20	20	194
Zone 4													
Zone 5													
Zone 6	10	30	30	30	45	45	15	33	30	30	46	37	381
Zone 7													
Zone 8													
Zone 9									15	20			35
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	10	64	56	47	68	65	32	56	65	50	66	57	636
Total	10	64	56	47	68	65	48	71	65	50	66	57	667

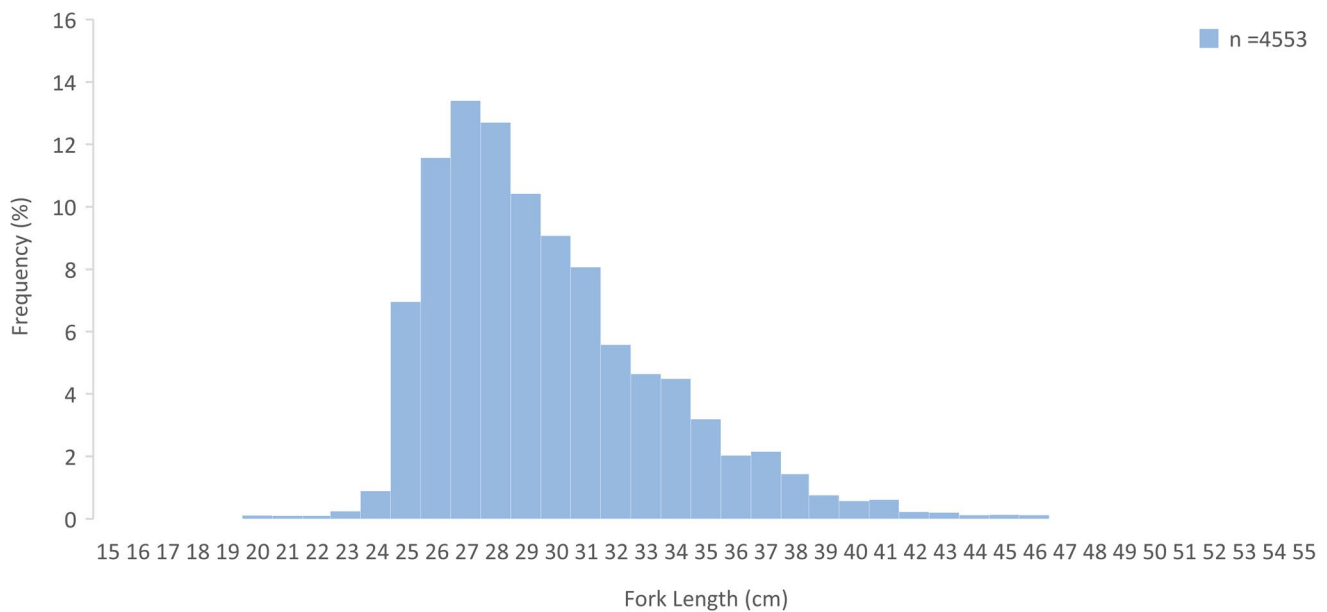


Figure 13. Length composition of Grey Morwong landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. The number of lengths used to create the Figure may differ slightly from the number of lengths measured due to length rules in the PISCES software.

Commentary

Sampling for 2023/24 was reasonably comprehensive, noting that greater sampling for lengths and ages from fish from the far south coast (ocean zones 9 and 10) would provide better alignment with the spatial operation of the fishery.

Two catches sampled, including a total of 31 fish for ageing purposes, were sampled from commonwealth fisheries. Consequently, no area of capture could be assigned to these samples. These numbers are reflected in the tables above.

Mulloway

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	New South Wales	Recovering	Catch, CPUE, Size Composition, Biomass Depletion, Mortality Rates, Spawning Potential Ratio

Prioritization and justification

Species Priority Ranking for 2023/24: 12

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **7**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **1**

Rank for lengths - **5**

Rank for ages – **4**

Aim of the Port Monitoring sampling for 2023/24

To collect size and age composition data that are representative of the commercial landed catch for NSW.

Sampling design

Length Frequency data were collected through the Ballina, Clarence River (Maclean and Iluka), and Coffs Harbour Fishermen's Co-Operatives and the Sydney Fish Markets. Landings from all commercial fisheries were monitored. For each location sampled on a day, all catches that were available were attempted to be sampled. Mulloway were measured from the tip of the nose to total length (nearest cm rounding down).

Mulloway otoliths were opportunistically sampled from gilled and gutted fish coming through the co-ops.

Mulloway sampling is based on month, estuary region and ocean zone strata for data expansion using reported commercial landings for each month and area. These expansions are done using the PISCES software.

Sampling graded catches

Mulloway catches are often graded, generally into XL, L, M, S or U. All grades are sampled on a sampling event, and because catches are often relatively small in terms of numbers of fish, all fish in each catch are usually measured.

Results

Table 40. Reported landings (kg) heat map of Mulloway by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value
Zone 2														
Zone 3														100%
Zone 4														
Zone 5														75%
Zone 6														
Zone 7														50%
Zone 8														
Zone 9														25%
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													63674	

Table 41. The number of days sampled for Mulloway by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3	2	3		1	2	2					2	4	16
Zone 4													
Zone 5	1			2	2	2	1	1			3	1	13
Zone 6							1		4	2	1	1	9
Zone 7						1	1	1		1			4
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	10	9	1	1		1		1	1	1		7	32
EG Region 3	4	3	3	2	2				3	1	3	1	22
EG Region 4	3	4	3	1	2		1	2	5	3	8	8	40
EG Region 5	1	3	3		3	1	1	2	1	5	2	7	29
EG Region 6	2		1	2		1		1	1	1	1		10
EG Region 7									1				1
Total (area known)	23	22	11	9	11	8	5	8	16	14	20	29	176
Total	23	22	11	9	11	8	5	8	16	14	20	29	176

Table 42. The number of catches sampled for Mulloway by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3	2	3		1	2	2					3	5	18
Zone 4													
Zone 5	1			2	2	2	1	1			3	1	13
Zone 6							1		6	2	3	1	13
Zone 7						1	1	1		1			4
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	14	12	1	1		1		1	1	2		18	51
EG Region 3	4	3	5	2	2				3	1	3	1	24
EG Region 4	5	5	5	1	3		1	2	7	6	20	22	77
EG Region 5	1	3	3		3	3	1	2	1	8	3	20	48
EG Region 6	2		1	3		1		1	1	1	2		12
EG Region 7									1				1
Total (area known)	29	26	15	10	12	10	5	8	20	21	37	68	261
Total	29	26	15	10	12	10	5	8	20	21	37	68	261

Table 43. The number of fish sampled for Mulloway by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3	8	6		1	8	3					4	5	35
Zone 4													
Zone 5	7			4	27	5	4	10			14	12	83
Zone 6							16		10	5	9	2	42
Zone 7						30	12	1		3			46
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	65	37	1	2		1		1	1	6		49	163
EG Region 3	100	11	48	5	5				5	2	6	8	190
EG Region 4	31	15	29	3	3		19	8	15	18	78	202	421
EG Region 5	3	6	20		8	17	13	7	1	75	21	252	423
EG Region 6	4		1	11		1		2	1	1	2		23
EG Region 7									1				1
Total (area known)	218	75	99	26	51	57	64	29	34	110	134	530	1427
Total	218	75	99	26	51	57	64	29	34	110	134	530	1427

Table 44. The number of fish sampled for ageing Mulloway by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1											4		4
Zone 2													
Zone 3	8	5		1	4	3					5	5	31
Zone 4													
Zone 5					26								26
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	65	37	5	2		1		1	1	4		48	164
EG Region 3	10	11	17	5	5				5	2	2		57
EG Region 4													
EG Region 5										6			6
EG Region 6													
EG Region 7													
Total (area known)	83	53	22	8	35	4	0	1	6	12	11	53	288
Total	83	54	22	8	35	4	0	1	6	12	11	53	289

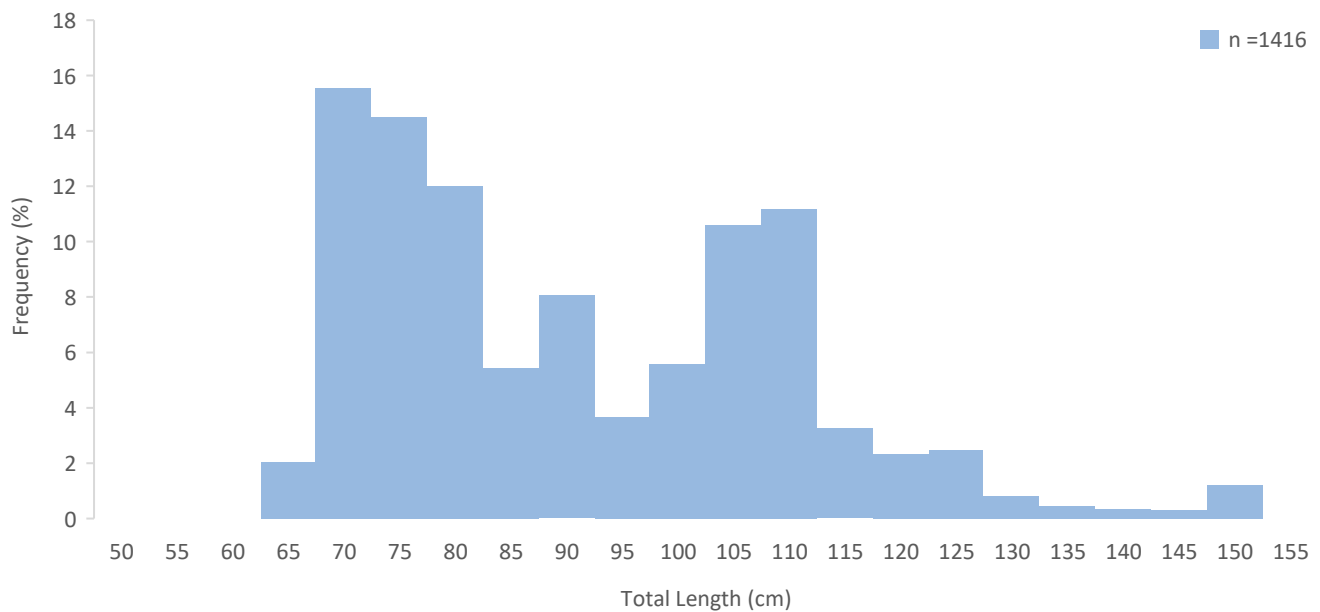


Figure 14. Length composition of Mulloway landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

Sampling for Mulloway was comprehensive during 2023/24. The distribution of sampling was similar to the spatial and temporal operation of the fishery.

Pearl Perch

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales, Queensland	Eastern Australia	Depleted	Stock assessment, biomass, standardised catch rate, fishery-dependent length and age, catch and effort

Prioritization and justification

Species Priority Ranking for 2023/24: **25**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring: **16**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **12**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial landed catch for NSW.

Sampling design

Length Frequency data were collected for ocean zones through the Ballina, Clarence River (Maclean and Iluka) and Coffs Harbour Fishermen's Co-Operatives. For each location, all catches that were on the floor on the day of sampling were attempted to be sampled. Pearl Perch were measured from the tip of the nose to fork length (nearest cm rounding down).

Pearl Perch sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Almost all Pearl Perch catches are ungraded, however, where there was more than one grade, all grades were sampled. Because there are so few numbers of fish in each catch, subsampling is rarely needed.

Results

Table 45. Reported landings (kg) heat map of Pearl Perch by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend Percent of Max Value
Ocean Zone/EG Region														
Zone 1														100% 75% 50% 25%
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													8143.1	

Table 46. The number of days sampled for Pearl Perch by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			2	2	2	3	2	1	3	1		2	18
Zone 3	1	2	2	5	2	3	5	2	5	5	4	1	37
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1	2	4	7	4	6	7	3	8	6	4	3	55
Total	1	2	4	7	4	6	7	3	8	6	4	3	55

Table 47. The number of catches sampled for Pearl Perch by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			2	2	2	3	2	1	3	1		2	18
Zone 3	1	2	2	6	2	3	5	2	5	5	4	1	38
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1	2	4	8	4	6	7	3	8	6	4	3	56
Total	1	2	4	8	4	6	7	3	8	6	4	3	56

Table 48. The number of fish sampled for Pearl Perch by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			9	13	38	79	59	12	90	14		80	394
Zone 3	3	17	28	60	26	34	55	31	140	156	56	7	613
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	3	17	37	73	64	113	114	43	230	170	56	87	1007
Total	3	17	37	73	64	113	114	43	230	170	56	87	1007

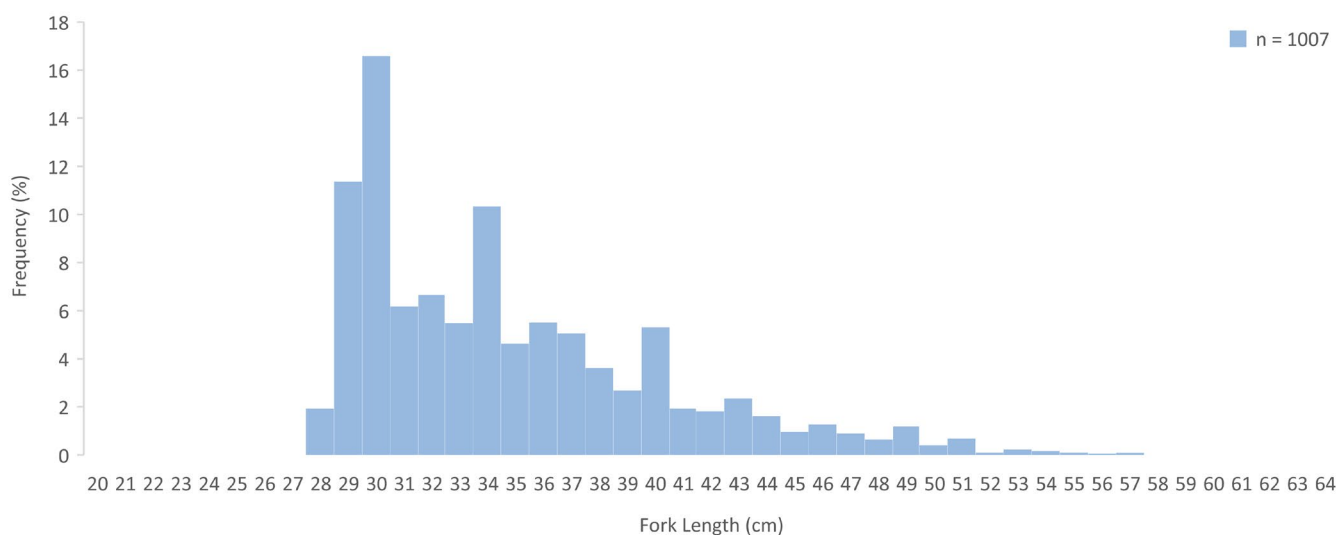


Figure 15. Length composition of Pearl Perch landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Commentary

Given the very small nature of the commercial fishery (approximately 8 t in 2023/24) the port monitoring coverage was adequate to inform the length structure for the fishery.

Pipi

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	New South Wales	Sustainable	Catch, Standardised catch rates, estimated biomass, spawning potential ratio

Prioritization and justification

Species Priority Ranking for 2023/24: 19

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **12**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **9**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the commercial landed catch for ocean zones 1 and 2 in northern NSW.

Sampling design

Length Frequency data from the Estuary General Fishery were collected from ocean zones 1 and 2 through Ballina Fishermen's Co-Operative. All catches that were on the floor on the day of sampling were attempted to be sampled. Pipsis were measured for maximum shell width (nearest 0.5 cm rounding down).

Pipi sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Almost all Pipi catches are ungraded, however, where there was more than one grade, all grades were sampled. Approx. 100 individuals were measured from each grade.

Results

Table 49. Reported landings (kg) heat map of Pipi by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value 100% 75% 50% 25%
Zone 1														
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													134071	

Table 50. The number of days sampled for Pipi by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1		3	2	2	1								8
Zone 2	1	3	1		2								7
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1	6	3	2	3	0	0	0	0	0	0	0	15
Total	1	6	3	2	3	0	0	0	0	0	0	0	15

Table 51. The number of catches sampled for Pipi by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1		5	6	6	1								18
Zone 2	1	3	2		4								10
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	1	8	8	6	5	0	0	0	0	0	0	0	28
Total	1	8	8	6	5	0	0	0	0	0	0	0	28

Table 52. The number of individuals sampled for Pipi by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1		260	450	450	100								1260
Zone 2	50	150	100		400								700
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	50	410	550	450	500	0	0	0	0	0	0	0	1960
Total	50	410	550	450	500	0	0	0	0	0	0	0	1960

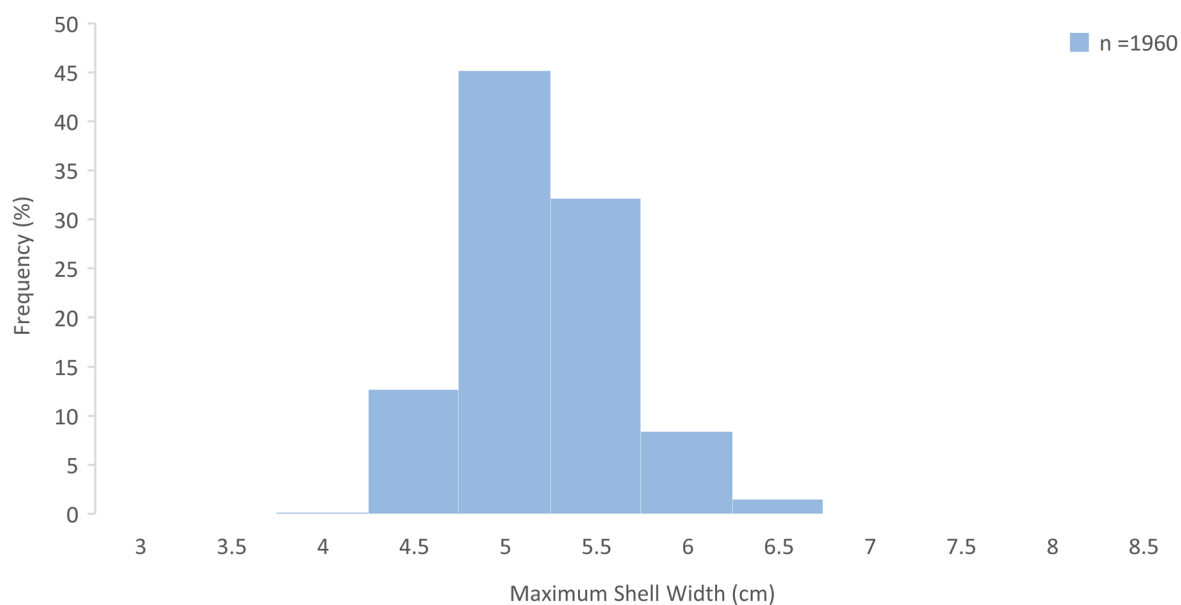


Figure 16. Length composition of Pipi landed by the commercial fishery for 2023/24. Pipis were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Commentary

Comprehensive sampling was carried out for ocean zones 1 and 2 during 2023/24.

Sand Whiting

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	New South Wales	Sustainable	Catch, effort and standardised CPUE, length and age, mortality rates

Prioritization and justification

Species Priority Ranking for 2023/24: **33**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **20**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **16**

Rank for ages – **10**

Aim of the Port Monitoring sampling for 2023/24

To collect size and age composition data that are representative of the commercial landed catch for NSW.

Sampling design

Length Frequency data from Estuary General Fishery were collected through the Clarence River (Maclean) Fishermen's Co-operative and the Sydney Fish Markets. Sampling focused on the Clarence River and Wallis Lake. For each location, all catches that were on the floor on the day of sampling were attempted to be sampled. Sand Whiting were measured from the tip of the nose to fork length (nearest cm rounding down).

Sand Whiting sampling is based on month, estuary region and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

A sample of approximately 30 fish (15 fish from two separate catches) from both Clarence River and Wallis Lake were purchased each month for ageing. Fish were selected from each grade in the approximate ratio of each grade in the total catch by weight.

Sampling graded catches

All Sand Whiting catches are graded, generally into L, M, S or U. All grades are sampled. Approximately 10 times the number of size classes per grade are measured (as tallied by the electronic measuring board software). These sub-samples are weighed, the total weight of each grade recorded, and the sample scaled up accordingly using the PISCES software.

Results

Table 53. Reported landings heat map of Sand Whiting by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														
Zone 1														Percent of Max Value 100% 75% 50% 25%
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													70735	

Table 54. The number of days sampled for Sand Whiting by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	3	3	4	3	3	4	6	5	5	2	2	5	45
EG Region 3													
EG Region 4	3	1	3	2	2	2	1	2	3	2	2	2	25
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	6	4	7	5	5	6	7	7	8	4	4	7	70
Total	6	4	7	5	5	6	7	7	8	4	4	7	70

Table 55. The number of catches sampled for Sand Whiting by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	4	3	7	4	7	7	8	8	8	3	2	8	69
EG Region 3													
EG Region 4	4	1	5	2	3	2	1	3	3	2	3	2	31
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	8	4	12	6	10	9	9	11	11	5	5	10	100
Total	8	4	12	6	10	9	9	11	11	5	5	10	100

Table 56. The number of fish sampled for Sand Whiting by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	15	99	135	255	480	571	710	1065	712	188	5	22	4257
EG Region 3													
EG Region 4	313	44	421	295	163	247	320	196	287	290	517	431	3524
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	328	143	556	550	643	818	1030	1261	999	478	522	453	7781
Total	328	143	556	550	643	818	1030	1261	999	478	522	453	7781

Table 57. The number of fish sampled for ageing Sand Whiting by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2	6	26	68	20	30	30	30	30	30			26	296
EG Region 3													
EG Region 4	29	15	30	30	30	30	15	31	30	60	30	29	359
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	35	41	98	50	60	60	45	61	60	60	30	55	655
Total	35	41	98	50	60	60	45	61	60	60	30	55	655

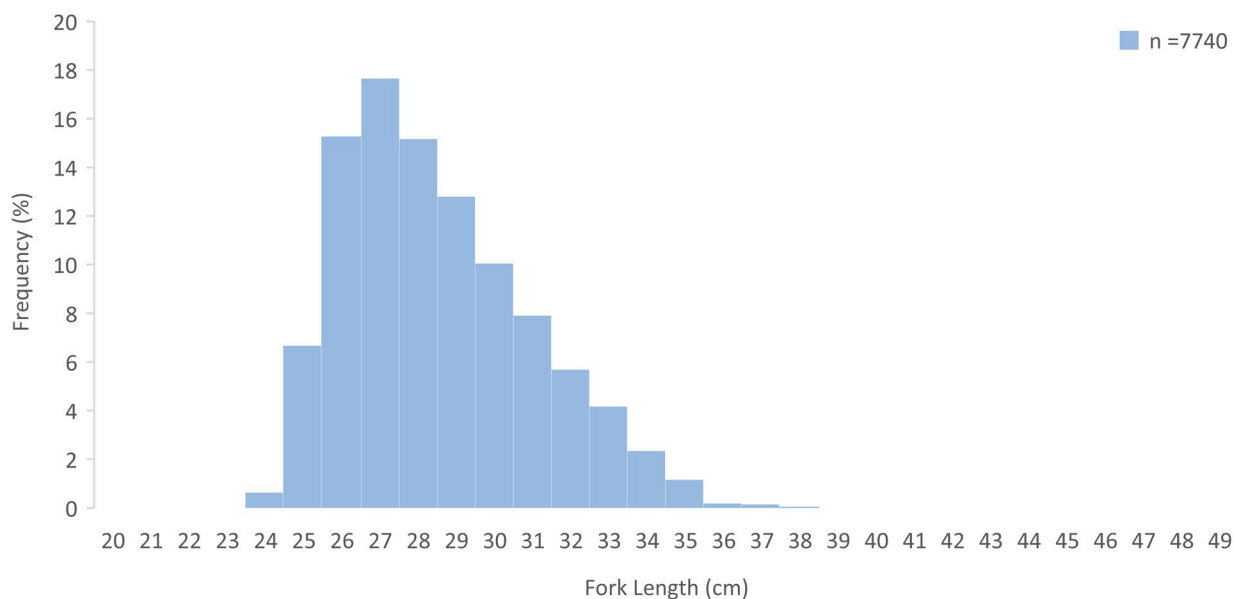


Figure 17. Length composition of Sand Whiting landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

Comprehensive sampling was achieved for Clarence River and Wallis Lake in 2023/24.

Sea Mullet

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales, Queensland	Eastern Australia	Sustainable	Spawning stock biomass, Catch, Effort, CPUE, Length and age compositions, Stock Assessment

Prioritization and justification

Species Priority Ranking for 2023/24: 18

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **11**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - **8**

Rank for ages – **5**

Aim of the Port Monitoring sampling for 2023/24

To collect size and age composition data that are representative of the commercial landed catch during the spawn-run fishery for NSW.

Sampling design

All sampling was done during a 2-week period in May through Markwell Fisheries in Chinderah. For each catch sampled, length frequency data from an ungraded subsample of approximately 120kg was collected. A separate length frequency was recorded for each sex. Sea Mullet were measured from the tip of the nose to fork length (nearest cm rounding down).

For each catch, a subsample of 15 randomly selected males and 15 randomly selected females were processed for ageing.

Sea Mullet sampling is based on monthly and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Results

Table 58. Reported landings (kg) heat map of Sea Mullet by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value
Zone 1														
Zone 2														100%
Zone 3														
Zone 4														75%
Zone 5														
Zone 6														50%
Zone 7														
Zone 8														25%
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													2365627	

Table 59. The number of days sampled for Sea Mullet by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1											1		1
Zone 2													
Zone 3											6		6
Zone 4											5		5
Zone 5											7		7
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	0	0	0	0	0	0	0	0	0	19	0	19
Total	0	0	0	0	0	0	0	0	0	0	19	0	19

Table 60. The number of catches sampled for Sea Mullet by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1											1		1
Zone 2													
Zone 3											7		7
Zone 4											5		5
Zone 5											7		7
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	0	0	0	0	0	0	0	0	0	0	20	20
Total	0	0	0	0	0	0	0	0	0	0	0	20	20

Table 61. The number of fish sampled for Sea Mullet by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1											160		160
Zone 2													
Zone 3											1019		1019
Zone 4											696		696
Zone 5											849		849
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	0	0	0	0	0	0	0	0	0	2724	0	2724
Total	0	0	0	0	0	0	0	0	0	0	2724	0	2724

Table 62. The number of fish sampled for ageing Sea Mullet by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1											30		30
Zone 2													
Zone 3											210		210
Zone 4											150		150
Zone 5											210		210
Zone 6													
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	0	0	0	0	0	0	0	0	0	0	600	0	600
Total	0	0	0	0	0	0	0	0	0	0	600	0	600

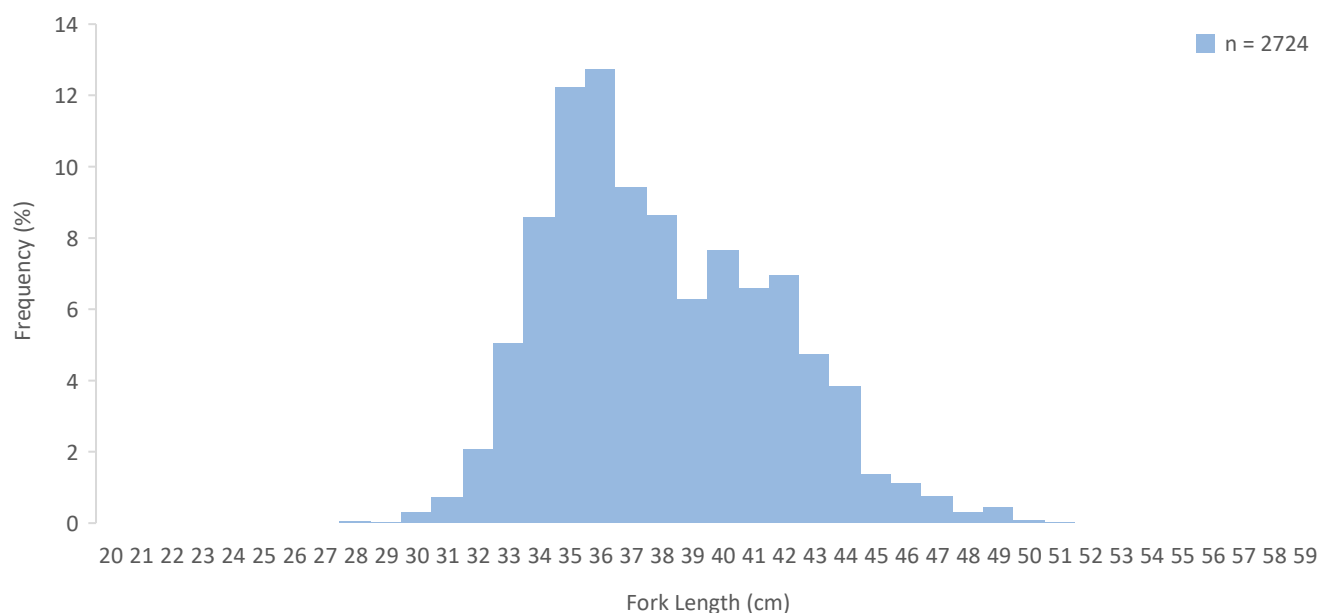


Figure 18. Length composition of Sea Mullet landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Commentary

Sampling for 2023/24 spawning-run season was reasonably comprehensive.

Silver Trevally

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales	New South Wales	Depleted	Catch, CPUE, biomass, fishing mortality, spawning potential, length and age structures

Prioritization and justification

Species Priority Ranking for 2023/24: 1

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring 1

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths - 1

Rank for ages – 1

Aim of the Port Monitoring sampling for 2023/24

To collect size and age composition data that are representative of the commercial landed catch for NSW.

Sampling design

Length Frequency data from all state fisheries were collected through the Sydney Fish Markets. For each location, all catches that were on the floor on the day of sampling were attempted to be sampled. Silver Trevally were measured from the tip of the nose to fork length (nearest cm rounding down).

Silver Trevally sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month, estuary region and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Silver Trevally catches are generally graded into XL, L, M, S or U. All grades are sampled. Approximately 10 times the number of size classes per grade are measured (as tallied by the electronic measuring board software). These sub-samples are weighed, the total weight of each grade recorded, and the sample scaled up accordingly, using the PISCES software. Because catches are relatively small, all fish in each catch are usually measured.

Results

Table 63. Reported landings (kg) heat map of Silver Trevally by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value 
Zone 1														
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													28651.9	

Table 64. The number of days sampled for Silver Trevally by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			1	1	4	1	2	1	2			2	14
Zone 3	1	3	2	1	1	3	1				2	1	15
Zone 4													
Zone 5	1				1				1	1			4
Zone 6	2	2	1	4	4	1	2	1		4	3	4	28
Zone 7			2	1	2	3	1		1	1			11
Zone 8							2	1					3
Zone 9		1		1				1	1		1		5
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3	1												1
EG Region 4									1				1
EG Region 5			2		1	2	1	1	1	1	1		10
EG Region 6	1	1	2	2	1			1	3	1	2		14
EG Region 7													
Total (area known)	6	7	10	10	14	10	9	6	10	8	9	7	106
Total	6	7	10	10	14	10	9	6	10	8	9	7	106

Table 65. The number of catches sampled for Silver Trevally by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			1	1	4	1	2	1	2			2	14
Zone 3	1	4	2	1	1	3	1				2	1	16
Zone 4													
Zone 5	1				1				1	1			4
Zone 6	3	2	1	5	6	1	2	1		7	5	9	42
Zone 7			2	1	2	3	1		2	1			12
Zone 8							2	2					4
Zone 9		1		1				1	1		1		5
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3	1												1
EG Region 4									1				1
EG Region 5			2		3	2	1	1	1	1	1		12
EG Region 6	1	1	4	3	2			1	4	1	2		19
EG Region 7													
Total (area known)	7	8	12	12	19	10	9	7	12	11	11	12	130
Total	7	8	12	12	19	10	9	7	12	11	11	12	130

Table 66. The number of fish sampled for Silver Trevally by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2			20	28	34	129	18	5	19			12	265
Zone 3	5	116	132	23	5	58	4				11	20	374
Zone 4													
Zone 5	36				53				45	19			153
Zone 6	109	34	47	120	308	42	43	111		183	124	288	1409
Zone 7			61	60	287	160	9		46	114			737
Zone 8							73	154					227
Zone 9		73		23				19	14		90		219
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3	88												88
EG Region 4									34				34
EG Region 5			23		108	144	72	106	67	117	25		662
EG Region 6	32	26	205	159	62			80	116	8	53		741
EG Region 7													
Total (area known)	270	249	488	413	857	533	219	475	341	441	303	320	4909
Total	270	249	488	413	857	533	219	475	341	441	303	320	4909

Table 67. The number of fish sampled for ageing Silver Trevally by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5	20												20
Zone 6		21	21	20	42			20		55		35	214
Zone 7				20		20			20	20			80
Zone 8			20				20						40
Zone 9		20						19			20		59
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5						20	20						40
EG Region 6													
EG Region 7													
Total (area known)	20	41	41	40	42	40	40	39	20	75	20	35	453
Total	20	41	41	40	42	40	40	59	20	75	20	35	473

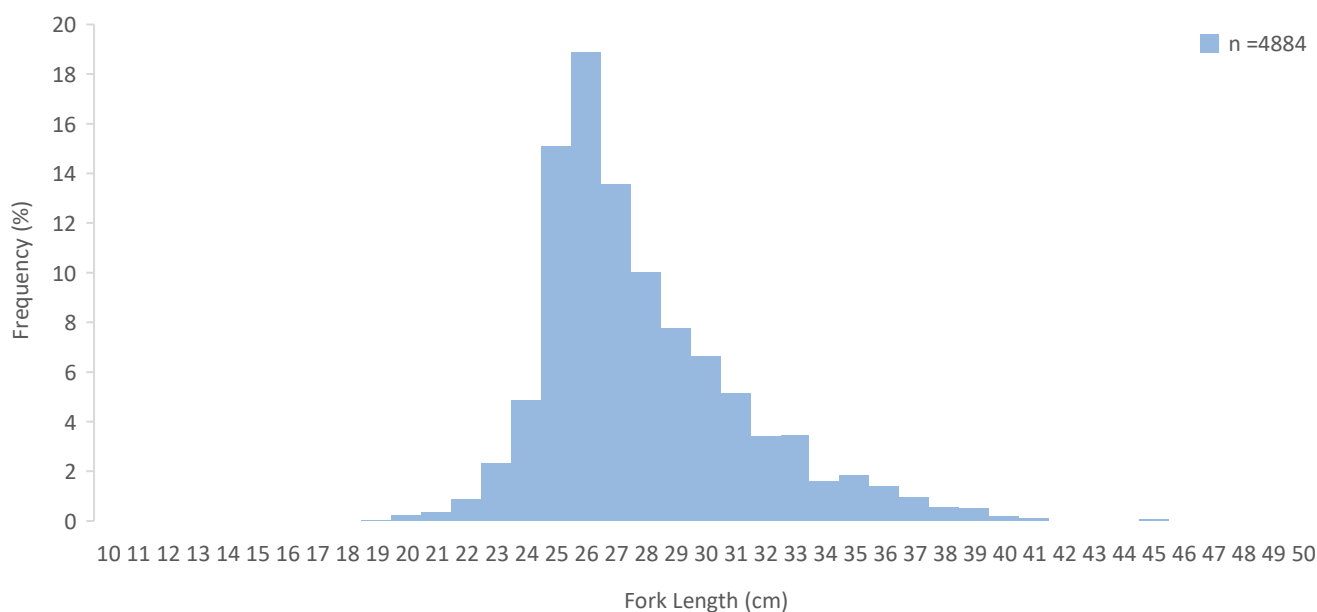


Figure 19. Length composition of Silver Trevally landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES. Number of lengths used to create figure may differ slightly from number of lengths measured due to length rules in PISCES software.

Commentary

Port monitoring for Silver Trevally during 2023/24 adequately covered the spatial and temporal operation of the fishery. The shift towards the total harvest comprising a greater proportion of estuary landings was captured through our sampling protocols.

Teraglin

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
New South Wales, Queensland	Eastern Australia	Sustainable	Depletion estimates, Catch, Effort, CPUE, Size composition, Age composition, Fishing mortality

Prioritization and justification

Species Priority Ranking for 2023/24: **81**

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring: **33**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths – **23**

Rank for ages – **not required**

Aim of the Port Monitoring sampling for 2023/24

To collect size composition data that are representative of the NSW commercial fishery landings.

Sampling design

Length Frequency data were collected for all ocean zones through the Ballina, Clarence River (Maclean) and Coffs Harbour Fishermen's Co-Operatives and the Sydney Fish Markets. For each location, all catches that were on the floor on the day of sampling were attempted to be sampled. Teraglin were measured from the tip of the nose to fork length (nearest cm rounding down).

Teraglin sampling is based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions are done using the PISCES software.

Sampling graded catches

Almost all Teraglin catches are graded, generally into XL, L, M, S or U. All grades are sampled during a sampling event. Approximately 10 times the number of size classes per grade are measured (as tallied by the electronic measuring board software). These sub-samples are weighed, the total weight of each grade recorded, and the sample scaled up accordingly using the PISCES software.

Results

Table 68. Reported landings (kg) heat map of Teraglin by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value 
Zone 1														
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													22386	

Table 69. The number of days sampled for Teraglin by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2					1								1
Zone 3	1	1		1			1	1		4	1	5	15
Zone 4													
Zone 5	4		2		4	5	4	2	1		1	4	27
Zone 6	2	2		3	3	1	1	5	4	4	3	3	31
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5										2			2
EG Region 6													
EG Region 7													
Total (area known)	7	3	2	4	8	6	6	8	5	10	5	12	76
Total	7	3	2	4	8	6	6	8	5	10	5	12	76

Table 70. The number of catches sampled for Teraglin by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2					1								1
Zone 3	1	1		1			2	1		4	1	8	19
Zone 4													
Zone 5	4		2		5	8	4	2	1		1	5	32
Zone 6	2	2		4	3	1	1	7	4	7	4	5	40
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5										2			2
EG Region 6													
EG Region 7													
Total (area known)	7	3	2	5	9	9	7	10	5	13	6	18	94
Total	7	3	2	5	9	9	7	10	5	13	6	18	94

Table 71. The number of Teraglin sampled by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2					4								4
Zone 3	3	10		3			19	15		161	2	174	387
Zone 4													
Zone 5	252		68		488	656	205	206	49		31	298	2253
Zone 6	103	16		246	96	116	2	535	104	100	29	102	1449
Zone 7													
Zone 8													
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5										227			227
EG Region 6													
EG Region 7													
Total (area known)	358	26	68	249	588	772	226	756	153	488	62	574	4320
Total	358	26	68	249	588	772	226	756	153	488	62	574	4320

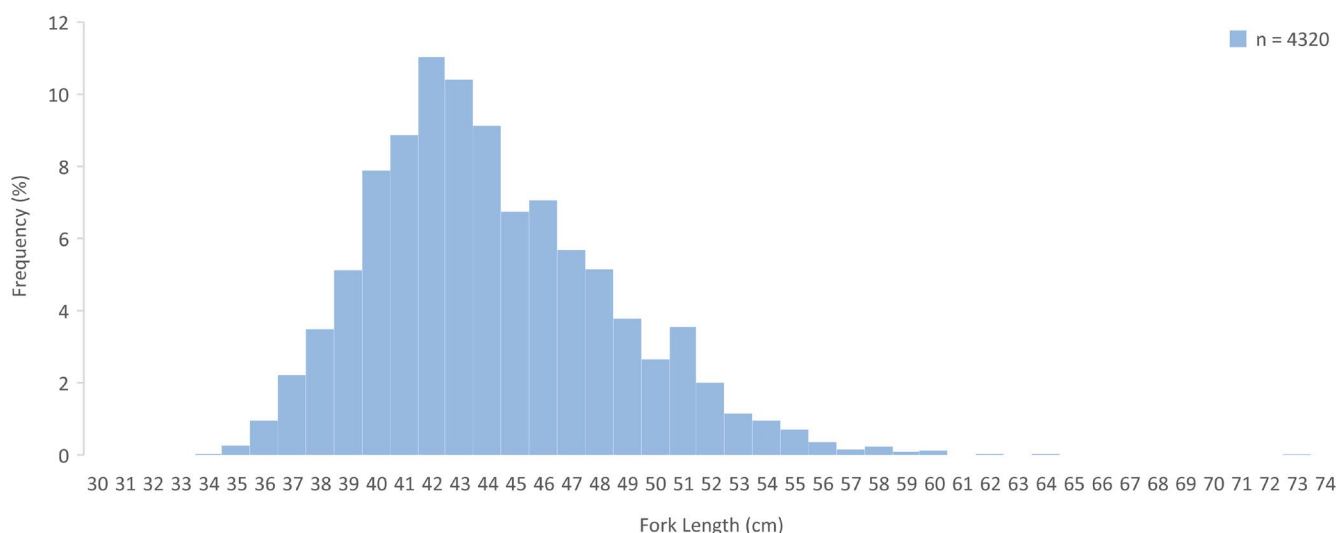


Figure 20. Length composition of Teraglin landed by the commercial fishery for 2023/24. Fish were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software PISCES.

Commentary

The port monitoring for Teraglin during 2023/24 provided length information that aligned well with the spatial and temporal operation of the fishery.

Yellowtail Scad

STOCK STATUS OVERVIEW (2023)

Stock status determination			
Jurisdiction	Stock	Stock status	Indicators
Commonwealth, New South Wales, Queensland	Eastern Australia	Sustainable	Historical catch and effort data, natural mortality, fishing mortality, fishing gear selectivity.

Prioritization and justification

Species Priority Ranking for 2023/24: 11

Data and Monitoring Plan for 2023/24

Ranking for Port Monitoring **6**

Base case port monitoring required to inform a reliable assessment:

Rank for biology – **not required**

Rank for lengths – **4**

Rank for ages – **3**

Aim of the Port Monitoring sampling for 2023/24

To collect size and age composition data that are representative of the NSW commercial Ocean Hauling Fishery landings.

Sampling design

Length Frequency data from the purse seine fisheries off Wollongong and Ulladulla (ocean zones 7 and 8) were collected from the Sydney Fish Markets. For each location, all catches were attempted to be sampled on any given day. Yellowtail Scad were measured from the tip of the nose to the fork length (nearest cm rounding down).

Two samples of 20 fish from ocean zones 7 and 8 were also purchased at the Sydney Fish Market each month for ageing. Fish were selected from each grade in the approximate ratio of each grade in the total catch by weight.

Yellowtail Scad sampling was based on month and ocean zone strata for data expansion using reported commercial landings for each month and ocean zone. These expansions were done using the PISCES software.

Sampling graded catches

Almost all Yellowtail Scad catches are graded, generally into J, XL, L, M, S or U. All grades were sampled. Approximately 10 times the number of size classes per grade are measured (as tallied by the electronic measuring board software). These sub-samples were weighed, the total weight of each grade recorded, and the sample scaled up accordingly using the PISCES software.

Results

Table 72. Reported landings (kg) heat map of Yellowtail Scad by month and area during 2023/24.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area	Legend
Ocean Zone/EG Region														Percent of Max Value 100% 75% 50% 25%
Zone 1														
Zone 2														
Zone 3														
Zone 4														
Zone 5														
Zone 6														
Zone 7														
Zone 8														
Zone 9														
Zone 10														
EG Region 1														
EG Region 2														
EG Region 3														
EG Region 4														
EG Region 5														
EG Region 6														
EG Region 7														
Total													455197	

Table 73. The number of days sampled for Yellowtail Scad by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7	4	4	4	3	4	4	4	4	5	4	3	3	46
Zone 8	1	2	1	3	2	1	1	2	2		1		16
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	5	6	5	6	6	5	5	6	7	4	4	3	62
Total	5	6	5	6	6	5	5	6	7	4	4	3	62

Table 74. The number of catches sampled for Yellowtail Scad by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7	7	6	6	3	7	5	8	7	7	5	4	6	71
Zone 8	1	2	1	3	2	1	1	2	2		1		16
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	8	8	7	6	9	6	9	9	9	5	5	6	87
Total	8	8	7	6	9	6	9	9	9	5	5	6	87

Table 75. The number of fish sampled for Yellowtail Scad by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2													
Zone 3													
Zone 4													
Zone 5													
Zone 6													
Zone 7	478	604	471	555	678	693	509	399	431	334	290	548	5990
Zone 8	116	170	77	282	291	151	115	174	189		50		1615
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	594	774	548	837	969	844	624	573	620	334	340	548	7605
Total	594	774	548	837	969	844	624	573	620	334	340	548	7605

Table 76. The number of fish sampled for ageing Yellowtail Scad by month and area during 2023/24. The shaded heat map represents the reported commercial landings.

Month-->	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Total by Area
Ocean Zone/EG Region													
Zone 1													
Zone 2	40												40
Zone 3													
Zone 4													
Zone 5					40								40
Zone 6													
Zone 7	20	20	40	19	20	60	40	40	60	42	60	80	501
Zone 8	20	20	41	40			20	20	20		20		201
Zone 9													
Zone 10													
EG Region 1													
EG Region 2													
EG Region 3													
EG Region 4													
EG Region 5													
EG Region 6													
EG Region 7													
Total (area known)	80	40	81	59	60	60	60	60	80	42	80	80	782
Total	90	40	81	59	60	60	60	60	80	42	83	80	795

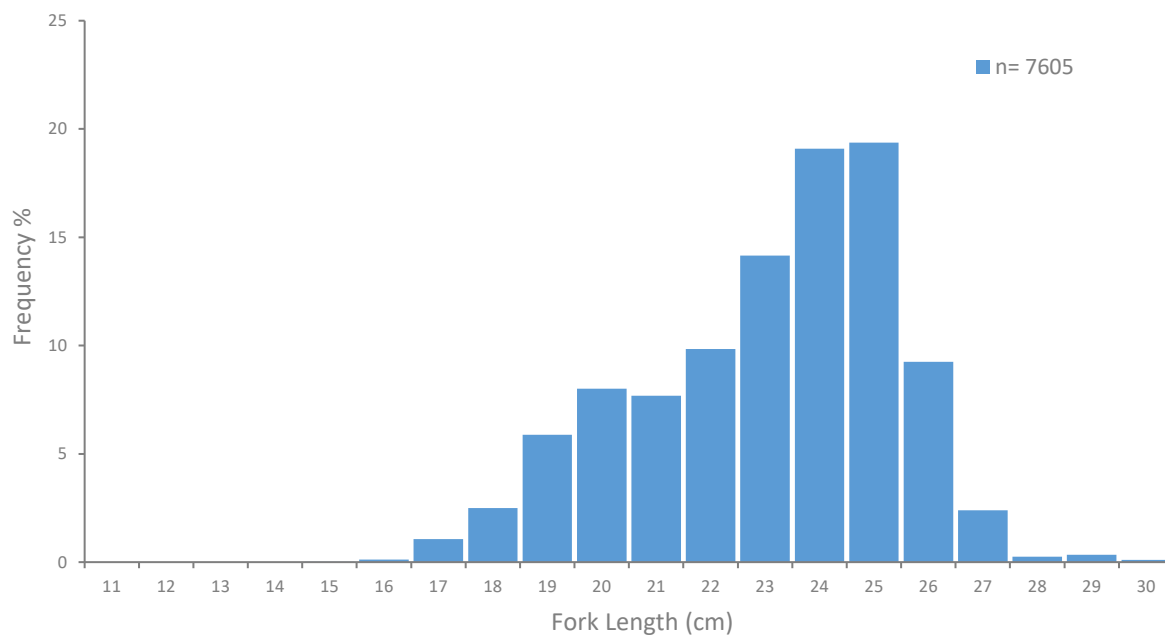


Figure 21. Length composition of Yellowtail Scad landed by the commercial fishery for 2023/24. Yellowtail Scad were sampled through the Port Monitoring program and combined according to the reported commercial landings in each sampling strata using the software.

Commentary

Monitoring of Yellowtail Scad during 2023/24 aligned well with the spatial and temporal operation of the fishery. Otoliths collected from ocean zones 2 and 5 were for a separate project and not used for assessment purposes.

Appendices

Appendix A -Staff

Core funded

John Stewart

James Craig

Anne-Marie Hegarty

Caitlin Young

Antony Gould

David Barker

Commercial Trust funded

David Barker

Glen Cuthbert

Glenn Campbell

Greg Davey

Emily Hunt

Aaron Krejci

Kyle Goodman

Appendix B - Species Priority List 2023/2024

Species priority list for research for 2023/2024, ranked highest to lowest. The multi-criteria decision analysis (MCDA) was based on commercial and recreational management weightings. Species selected for port monitoring in 2023/2024 are highlighted.

MCDA rank	Common Name	MCDA rank	Common Name	MCDA rank	Common Name
1	Silver Trevally	51	Gummy Shark	101	Australian Anchovy
2	Gemfish	52	Shovelnose Rays	102	Periwinkles (Turban Shell) - other
3	Bluespotted Flathead	53	Loligo Squid	103	Eastern Blue Groper
4	Eastern School Whiting	54	Spanish Mackerel	104	Mako Sharks
5	Eastern Rock Lobster	55	Bass Groper	105	Longtail Tuna
6	Stout Whiting	56	Royal Red Prawn	106	Cunjevoi
7	Blue Mackerel	57	Common Jack Mackerel	107	Estuary Perch
8	Tiger Flathead	58	Crimsonband Wrasse	108	Freshwater Shrimp
9	Grey Morwong	59	Tailor	109	Australian Bass
10	Spanner Crab	60	Long Spined Sea Urchin (Purple/Black)	110	Bastard Trumpeter
11	Yellowtail Scad	61	Spotted Mackerel	111	Bluethroat Wrasse
12	Mulloway	62	Blacktip Sharks (Common)	112	Spangled Emperor
13	Blue-eye Trevalla	63	Sandbar Shark	113	Snook
14	Australian Sardine	64	Cobia	114	Short Spined Sea Urchin (Green)
15	Eastern King Prawn	65	Dusky Whaler	115	Angel Sharks
16	Giant Mud Crab	66	John Dory	116	Eastern Pigfish
17	Red Sea Urchin	67	Mirror Dory	117	Trawl Octopus
18	Sea Mullet	68	Yellowfin Tuna	118	Wobbeong Sharks
19	Pipi	69	Jackass Morwong	119	Greentail Prawn
20	Redfish	70	Murray Cod	120	Red Gurnard and Latchets
21	Blacklip Abalone	71	Estuary Cobbler	121	Mackerel Tuna
22	Eastern School Prawn	72	Golden Perch	122	Gloomy Octopus
23	Yellowfin Bream	73	Dart	123	Red Morwong
24	Blue Swimmer Crab	74	Mahi Mahi	124	Frigate Mackerel
25	Pearl Perch	75	Leatherjackets-other	125	Diamondfish
26	Eastern Sea Garfish	76	Whaler Sharks - other	126	Striped Perch
27	School Shark	77	Yabby (freshwater)	127	Bigeyes
28	Southern Bluefin Tuna	78	Mangrove Jack	128	Hammerhead Sharks
29	Luderick	79	Australian Herring	129	Tiger Shark
30	Ghost Nipper	80	Sawsharks	130	Tilefish
31	Dusky Flathead	81	Teraglin	131	Boarfish
32	Pink Ling	82	Rock Blackfish	132	Blue Shark
33	Sand Whiting	83	Goulds (Arrow) Squid	133	Mantis Shrimps
34	Blue Warehou	84	Ribaldo	134	Ghostsharks
35	Trumpeter Whiting	85	Elephantfish	135	Banded Morwong
36	Snapper	86	School Mackerel	136	Maori Octopus
37	Silver Sweep	87	Striped Marlin	137	Catfish
38	Beachworms	88	Silver Warehou	138	Tiger Prawn (Brown)
39	Eastern Australian Salmon	89	Flounders	139	Pale Octopus
40	Dogfish	90	Red Mullet		
41	Hapuku	91	Soles		
42	Ocean Jackets	92	Whitebait - Sandy Sprat		
43	Yellowtail Kingfish	93	Sand Mullet		
44	Southern Calamari	94	Cuttlefish		
45	Australian Bonito	95	Eastern Red Scorpionfish		
46	River Eels	96	Black Bream		
47	Balmain Bugs	97	River Garfish		
48	Common Silverbiddy	98	Banded Rockcod		
49	Tarwhine	99	Hairtail		
50	Goldspot Mullet	100	Southern Maori Wrasse		

