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Otoliths of south-western Australian fish: a photographic catalogue


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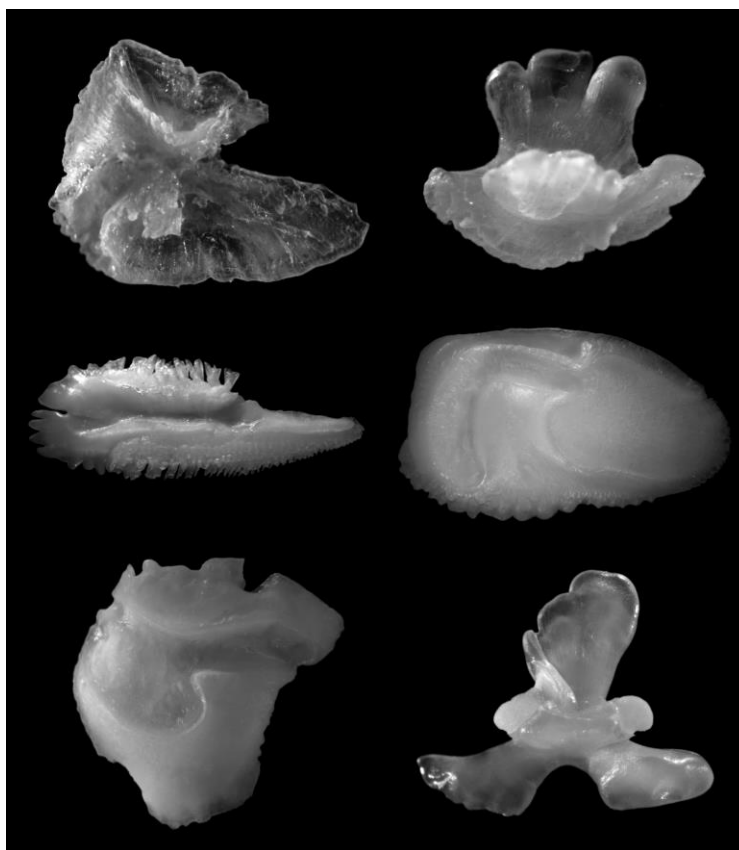
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Otoliths of south-western Australian fish: A photographic catalogue

Chris Dowling, Joshua Brown, Elaine Lek, Kim Smith



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1. Introduction

All bony fish (teleosts) have ‘ear stones’ called otoliths which they use for orientation and hearing (Popper *et al.* 2005). Each individual fish has three pairs of otoliths, the sagittae (singular sagitta), which is typically the largest, lapilli (lapillus), and asterisci (asteriscus) (Figure 1), contained within a series of interconnected membranes that comprise the inner ear located behind and approximately level with the eyes. Otoliths consist of a matrix of calcium carbonate and protein. Typically, the sagitta and lapillus are composed of aragonite, while the asteriscus is composed of vaterite (Campana 1999, Falini *et al.* 2005). Otoliths grow continuously throughout a fish’s lifetime and, unlike scales, are not resorbed during periods of slow or zero somatic growth.

Cyclic variations in calcium carbonate accretion result in the formation of daily and annual ‘growth rings’ in otoliths which can be used to determine the age of the fish. As new calcium carbonate is deposited at the otolith surface, elements are incorporated from food and the surrounding environment (Campana 1999). Due to these properties, otoliths can act like biological data loggers; recording a fish’s age and growth history, where and when it lived, which stock it belonged to, and give insights into past environmental conditions (e.g. Gamboa 1991, Campana and Casselman 1993, Harvey *et al.* 2000, Campana 2005, Disspain *et al.* 2011, Ferguson *et al.* 2011, Morrongiello *et al.* 2012, Rountrey *et al.* 2014, Long *et al.* 2018).

The shape and morphology of the otolith is species-specific (Schulz-Mirbach *et al.* 2019) and this allows fish to be identified through their otoliths (e.g. Wakefield *et al.* 2014). Otoliths are also highly resistant to degradation and often the only parts preserved of fish that have died or been eaten. Otoliths have hence been used to recreate the diets of piscivores (Bowen and Harrison 1994, Chiaradia *et al.* 2012, Pethybridge *et al.* 2012, Rogers *et al.* 2012, Lin *et al.* 2020), and provide critical evidence in archaeological and palaeo-environmental investigations (Van Neer *et al.* 2002, Disspain *et al.* 2016, Avigliano *et al.* 2020).

Detailed descriptions of otolith shapes and morphologies that can be used to identify particular fish species are therefore invaluable to researchers in many different fields. To meet this need, otolith catalogues have now been developed for many regions including the waters off southern Africa (Smale *et al.* 1995), the north-west Atlantic (Härkönen 1986, Campana 2004), the Mediterranean (Tuset *et al.* 2008), the Southern Ocean (Hecht 1987; Williams and McEldowney 1990) and south-eastern Australia (Furlani *et al.* 2007).

This otolith catalogue provides photographic references of temperate and sub-tropical teleost otoliths found in marine and estuarine waters off south-western Australia. It focuses on commonly encountered prey species and key commercially and recreationally caught species, but also includes some uncommon species from this region.

2. Methods

Otoliths in this catalogue were collected over a 36 year period (1985 to 2021) in the coastal and estuarine waters of south-western Australia, between Shark Bay (25.783° S, 113.299° E) and the Recherche Archipelago (34.020° S, 123.502° E) (Figure 2). Fish collection methods include trawl-, haul-, gill- and seine netting, hook-and-line and spear fishing. In addition, some otoliths were removed from fish found in the stomach of predatory fishes or fish washed up on beaches. A total of 267 species, from 20 orders and 103 families, of temperate and sub-tropical teleost fishes are presented. Fish length (total and fork), weight and sex were recorded before otoliths were removed from fresh or defrosted samples. Otoliths were cleaned in freshwater and dried prior to storage in gelatine capsules for protection.

Each otolith was photographed in black and white using a Jenoptik ProgRes® Model C7 8.1-Megapixel digital camera mounted on a Nikon SMZ 745T dissecting microscope. In all photographs, the scale bar (bottom right corner) represents one millimetre. For each otolith image, the fish's total length (TL, in millimetres), is given in the bottom left corner. Magnification ranged between 2.5x to 37.5x and surround-reflected lighting was used to illuminate the otolith. The sagitta otolith is displayed for each species. The exceptions are two Siluriformes species, where the lapillus was displayed because it is the largest in these species. The proximal side of the left otolith is displayed for each species where possible (Figure 3), but, in cases where the left otolith was missing or broken, the right otolith is displayed.

Taxonomic arrangement of species is based on Nelson (1994), with species listed alphabetically within their family groups. Scientific nomenclature follows that of the California Academy of Science <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>. Australian standard common names are used (<http://www.marine.csiro.au/data/caab/>). Information about the Australian distribution and maximum known length of each species are sourced from Hutchins and Swainston (1986), Bray and Gomon (2020), or Department of Primary Industries and Regional Development records (unpublished), unless stated otherwise.

We have attempted to display up to three individual otoliths per species ranging from juveniles to adults to highlight any ontogenetic change and intra-species variations that may occur.

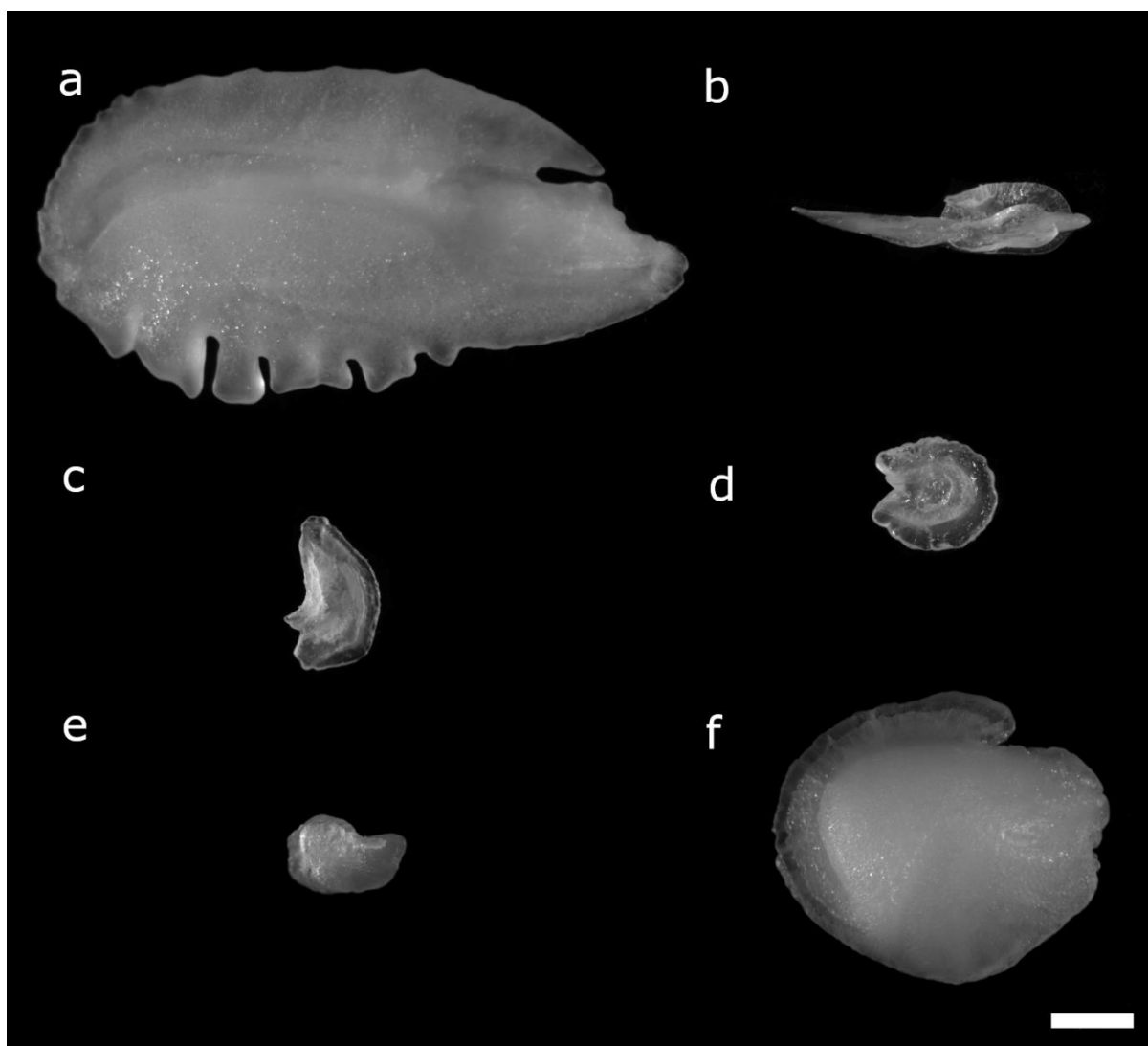


Figure 1. The sagitta (a, b), asteriscus (c, d) and lapillus (e, f) otoliths from *Arripis georgianus* (Australian herring) (a, c, e) and *Plotosus lineatus* (striped catfish) (b, d, f). Total length of *A. georgianus* = 220 mm and *P. lineatus* = 195 mm. Scale bar represents 1 mm.



Figure 2. The coastal and estuarine waters off south-western Australia where otoliths in this catalogue were collected (collection area shaded in red).

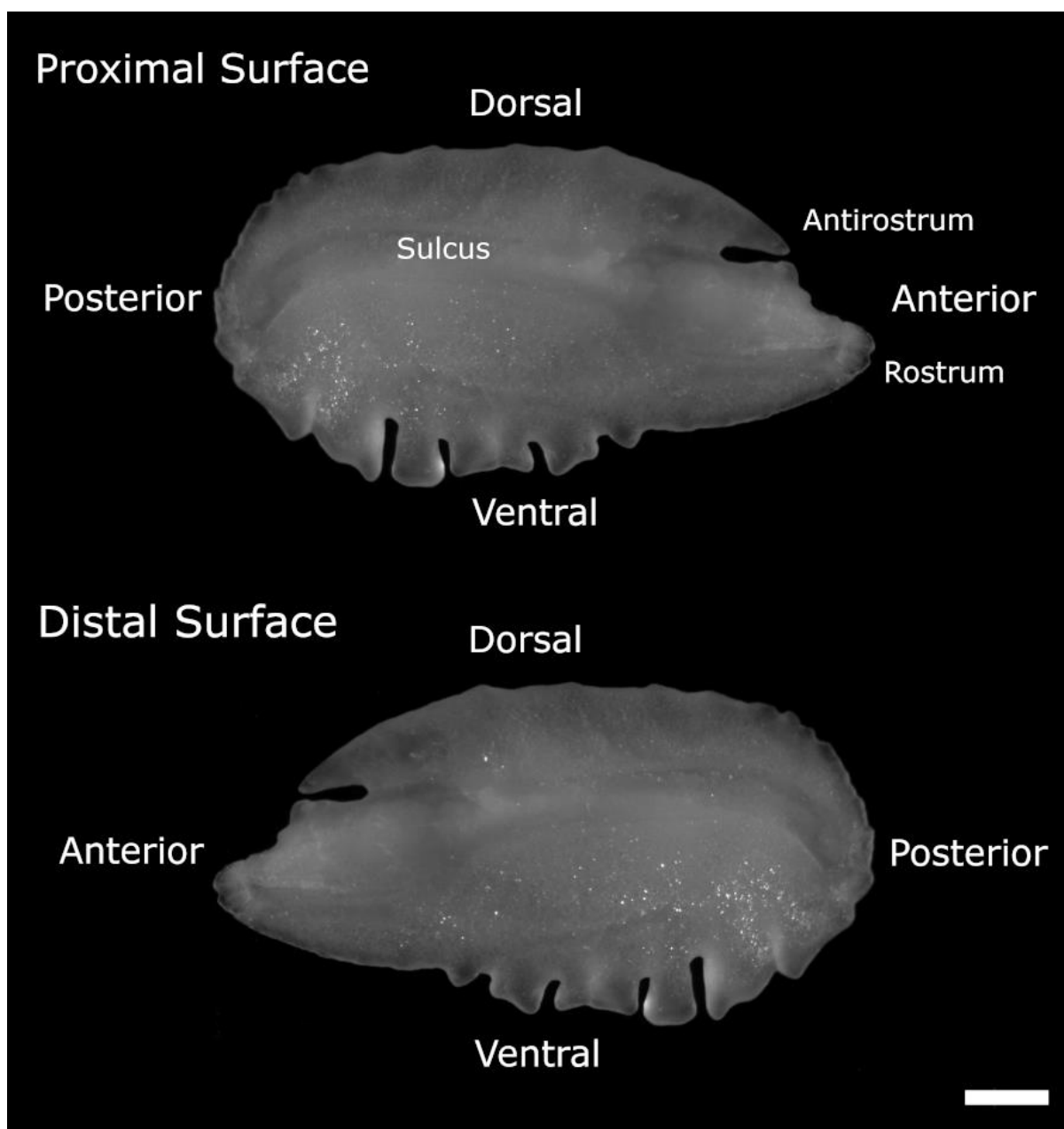


Figure 3. The proximal and distal views of a left sagitta otolith (*Arripis georgianus*), highlighting key features. Scale bar represents 1 mm.

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4.1 Fish photograph credits

Amber Quinn (DPIRD): *Siphamia cephalotes*. **Aqua Research & Monitoring Services:** *Atherinosoma elongata*; *Dotalabrus alleni*; *Elops hawaiiensis*; *Eubalichthys cyanoura*. **Ben Rome and Stephen Newman (DPIRD):** *Thunnus albacares*; *Zeus faber*. **Biodiversity Heritage Library:** *Xiphias gladius*. **Chris Dowling (DPIRD):** *Ablennes hians*; *Acanthaluteres brownii*; *Acanthaluteres vittiger*; *Acanthistius serratus*; *Acanthopagrus butcheri*; *Aetapcus maculatus*; *Aldrichetta forsteri*; *Allomycterus pilatus*; *Ammotretis elongatus*; *Ammotretis lituratus*; *Amniataba caudavittata*; *Anoplocapros amygdaloides*; *Arenigobius bifrenatus*; *Argyrosomus japonicus*; *Arnoglossus micrommatus*; *Arripis georgianus*; *Arripis truttaceus*; *Atherinomorus vaigiensis*; *Bodianus frenchii*; *Bodianus vulpinus*; *Brachaluteres jacksonianus*; *Caesioperca* sp.; *Caesiocorpius theagenes*; *Centroberyx gerrardi*; *Centroberyx lineatus*; *Chaetodon assarius*; *Cheilopogon* spp.; *Chelidonichthys kumu*; *Chelmonops curiosus*; *Chironemus georgianus*; *Chironemus maculosus*; *Chromis klunzingeri*; *Chromis westaustralis*; *Chrysophrys auratus*; *Cleidopus gloriamaris*; *Cnidoglanis macrocephalus*; *Coelorinchus mirus*; *Contusus brevicaudus*; *Coris auricularis*; *Coryphaena hippurus*; *Cristiceps australis*; *Cynoglossus broadhursti*; *Cynoglossus maculipinnis*; *Dactylophora nigricans*; *Dactylopus dactylopus*; *Decapterus muroadsi*; *Dendrochirus brachypterus*; *Diagramma pictum*; *Dinolestes lewini*; *Dipulus caecus*; *Echeneis naucrates*; *Echinophryne crassispina*; *Engraulis australis*; *Enoplosus armatus*; *Epinephelides armatus*; *Epinephelus coioides*; *Etrumeus jacksoniensis*; *Eubalichthys mosaicus*; *Favonigobius lateralis*; *Gerres subfasciatus*; *Girella tephraeops*; *Girella zebra*; *Glaucosoma hebraicum*; *Gnathanacanthus goetzeei*; *Gnathophipis longicauda*; *Goniistius gibbosus*; *Goniistius rubrolabiatus*; *Gonorynchus greyi*; *Gymnapistes marmoratus*; *Gymnothorax prasinus*; *Gymnothorax woodwardi*; *Haletta semifasciata*; *Halichoeres brownfieldi*; *Hemiramphus robustus*; *Heteroclinus adelaidae*; *Heteroclinus roseus*; *Heteroscarus acroptilus*; *Hirundichthys* spp.; *Hyperlophus vittatus*; *Hypoplectrodes nigroruber*; *Hypopterus macropterus*; *Hyporhamphus melanochir*; *Hyporthodus* c.f. *octofasciatus*; *Ichthyoscopus barbatus*; *Inegocia japonica*; *Katsuwonus pelamis*; *Kyphosus sydneyanus*; *Lagocephalus scleratus*; *Latris lineata*; *Latropiscis purpurissatus*; *Lepidotrigla papilio*; *Leptatherina wallacei*; *Lesueurina platycephala*; *Lethrinus miniatus*; *Lethrinus nebulosus*; *Leviprora inops*; *Lutjanus russellii*; *Metavelifer multiradiatus*; *Meuschenia flavolineata*; *Meuschenia freycineti*;

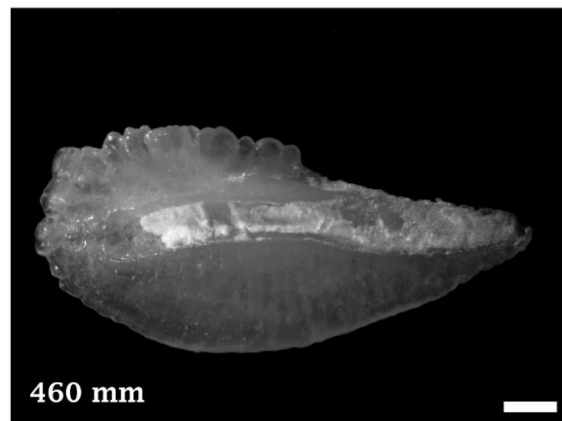
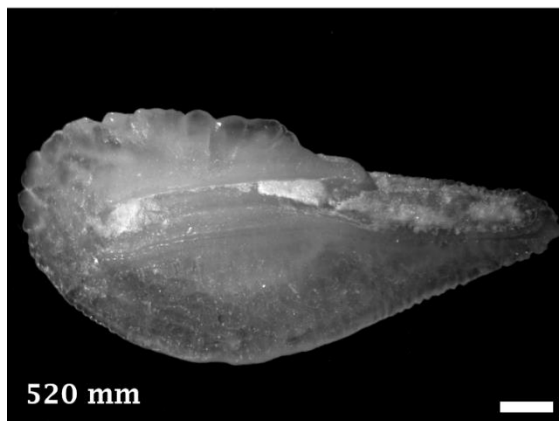
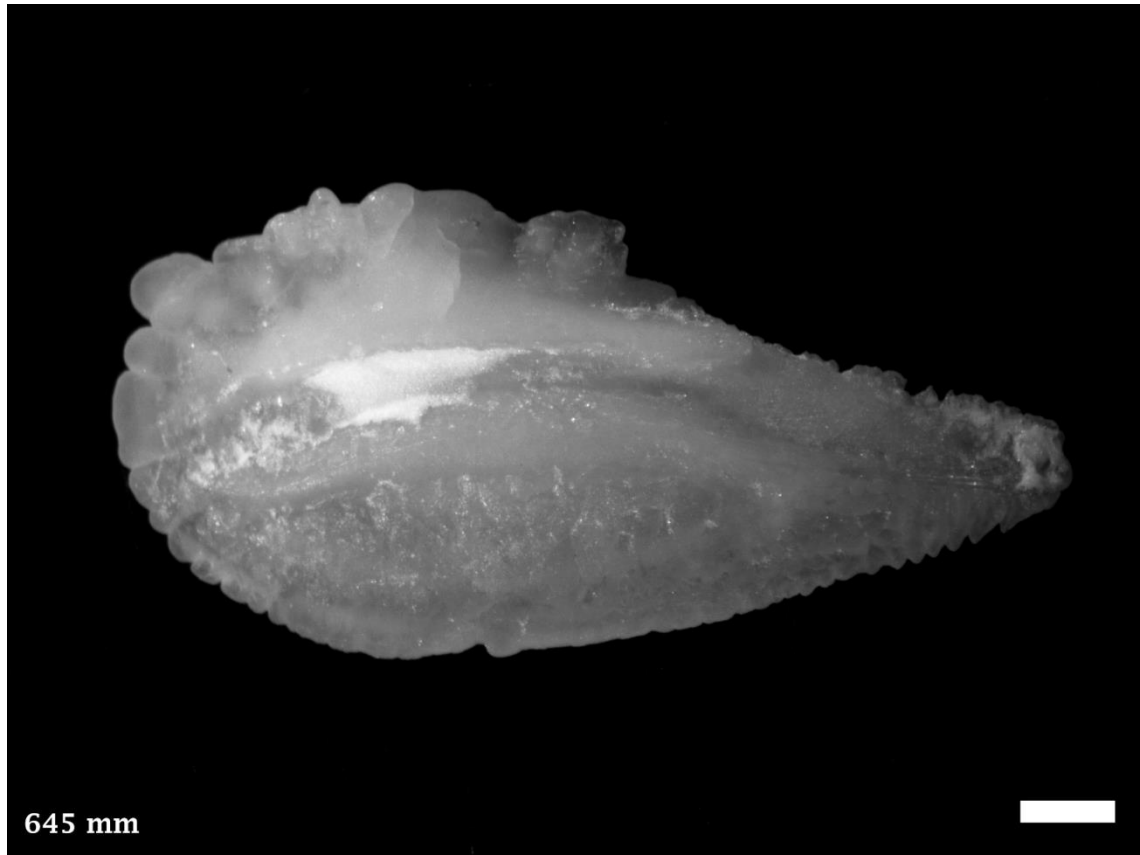
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rubescens; *Paristiopterus gallipavo*; *Scorpiis georgianus*; *Tilodon sexfasciatus*. **Peter Coulson (DPIRD)**: *Achoerodus gouldii*; *Centroberyx affinis*; *Erythrocles schlegelii*; *Helicolenus percoides*; *Neosebastes nigropunctatus*; *Platycephalus laevigatus*. **Philip Good (Murdoch University)**: *Afurcagobius suppositus*; *Craterocephalus mugiloides*. **Phil Watson (Flickr)**: *Parazanclistius hutchinsi*. **Russell Burrow**: *Pinjalo pinjalo*. **Silas Mountford (DPIRD)**: *Euleptorhamphus viridis*; *Regalecus glesne*. **Tim Leary (DPIRD)**: *Ruvettus pretiosus*. **Tom Trnski (Australian Museum)**: *Plagiogeneion rubiginosum*.

5. Otolith Plates

5.1 *Elops hawaiiensis*, Hawaiian Giant Herring

ELOPIFORMES ELOPIDAE (Giant Herrings)

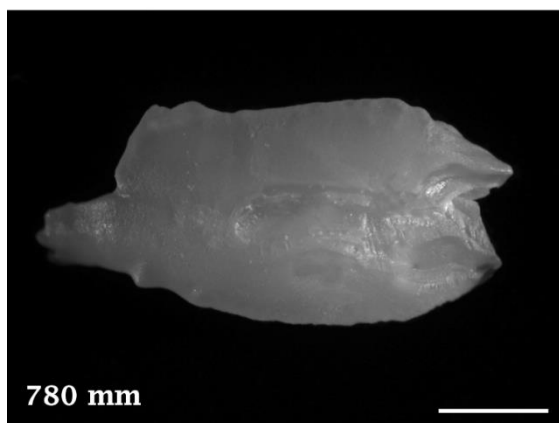
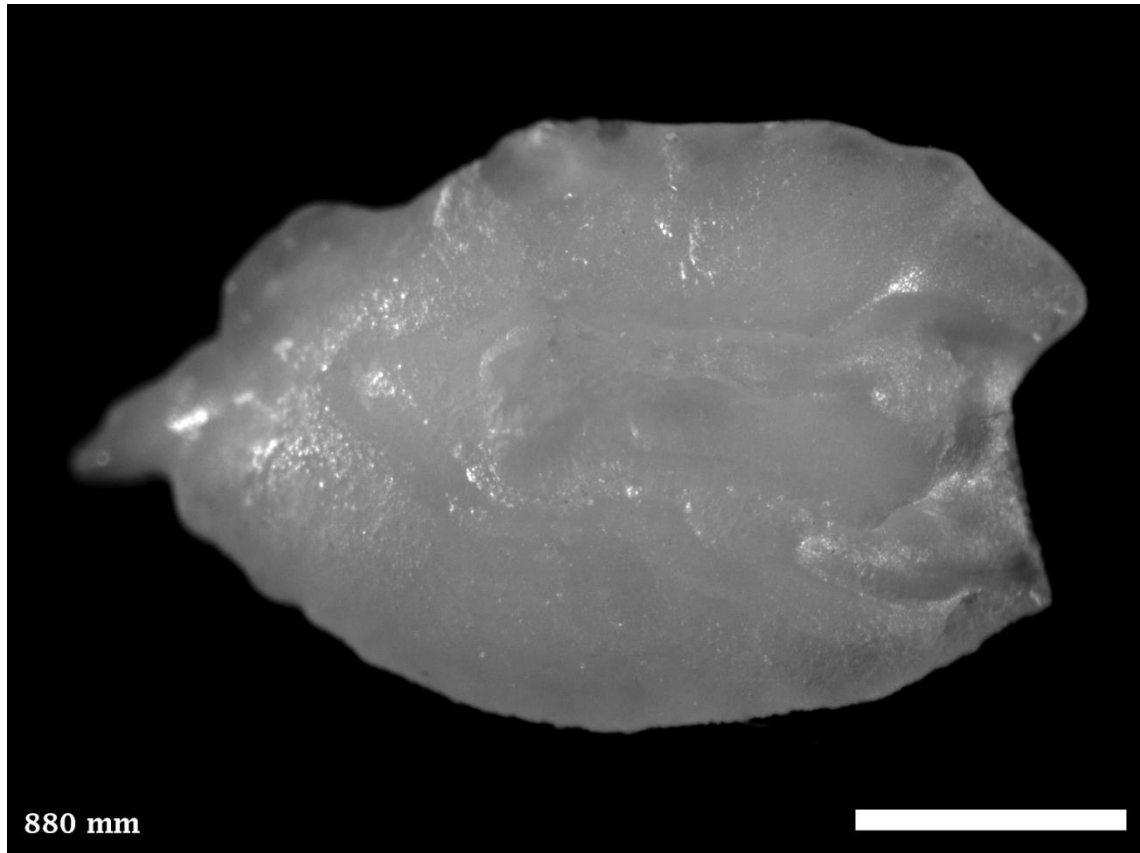


Distribution and Length: Coastal and estuarine waters from Coffin Bay, SA west around Australia to Wilsons Promontory, Victoria. 1200 mm TL.



5.2 *Gymnothorax prasinus*, Green Moray

ANGUILLIFORMES MURAENIDAE (Moray Eels)

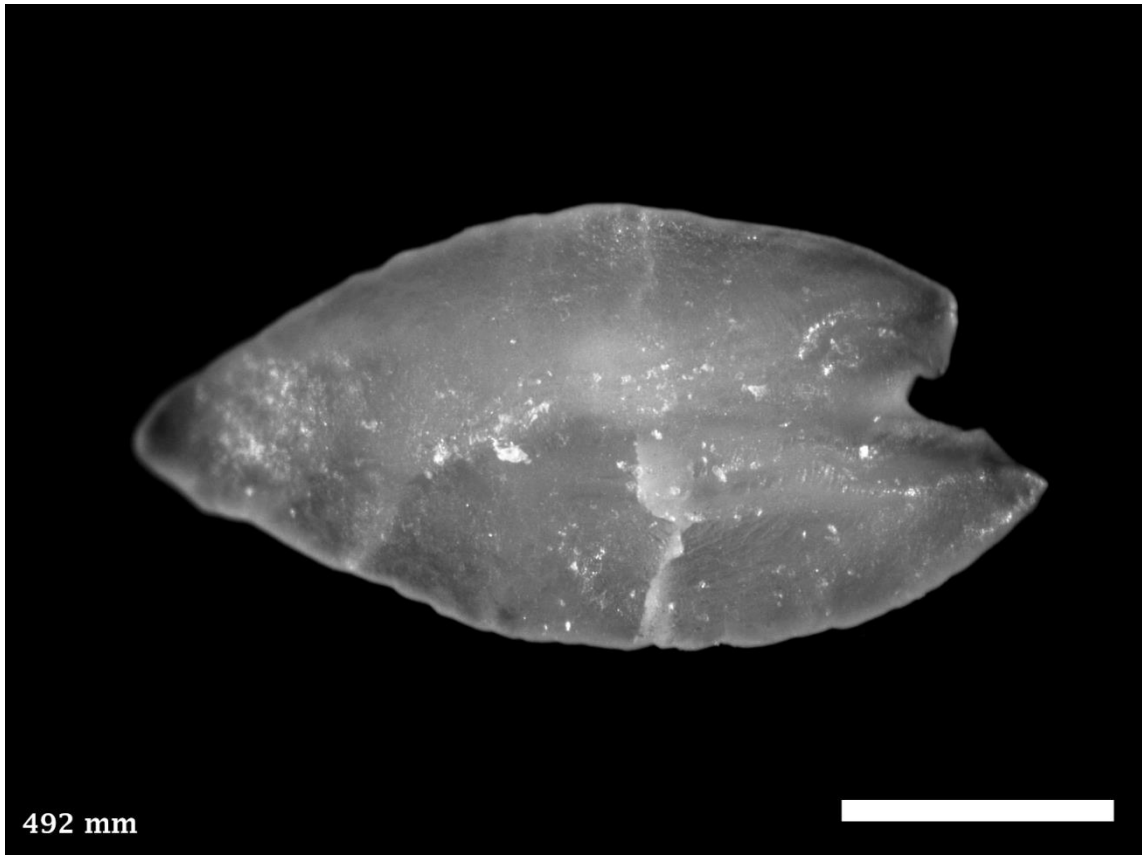


Distribution and Length: Reefs from Shark Bay, WA south around to Anxious Bay, SA and southern Queensland south to northern Tasmania. 1500 mm TL.



5.3 *Gymnothorax woodwardi*, Woodward's Moray

ANGUILLIFORMES MURAENIDAE (Moray Eels)

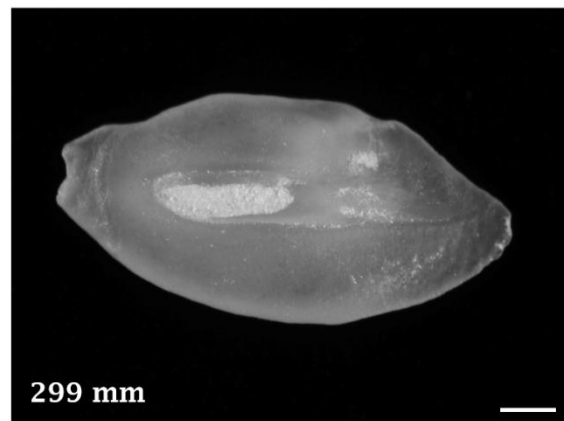
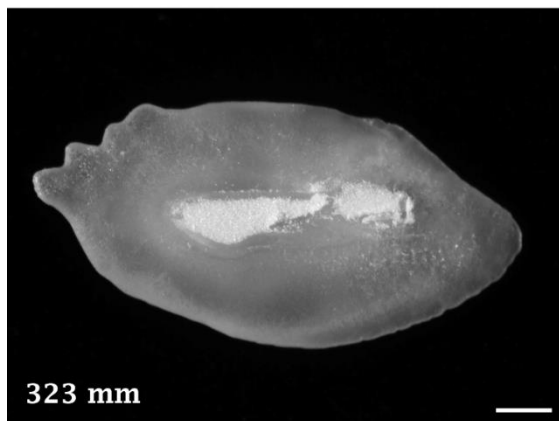
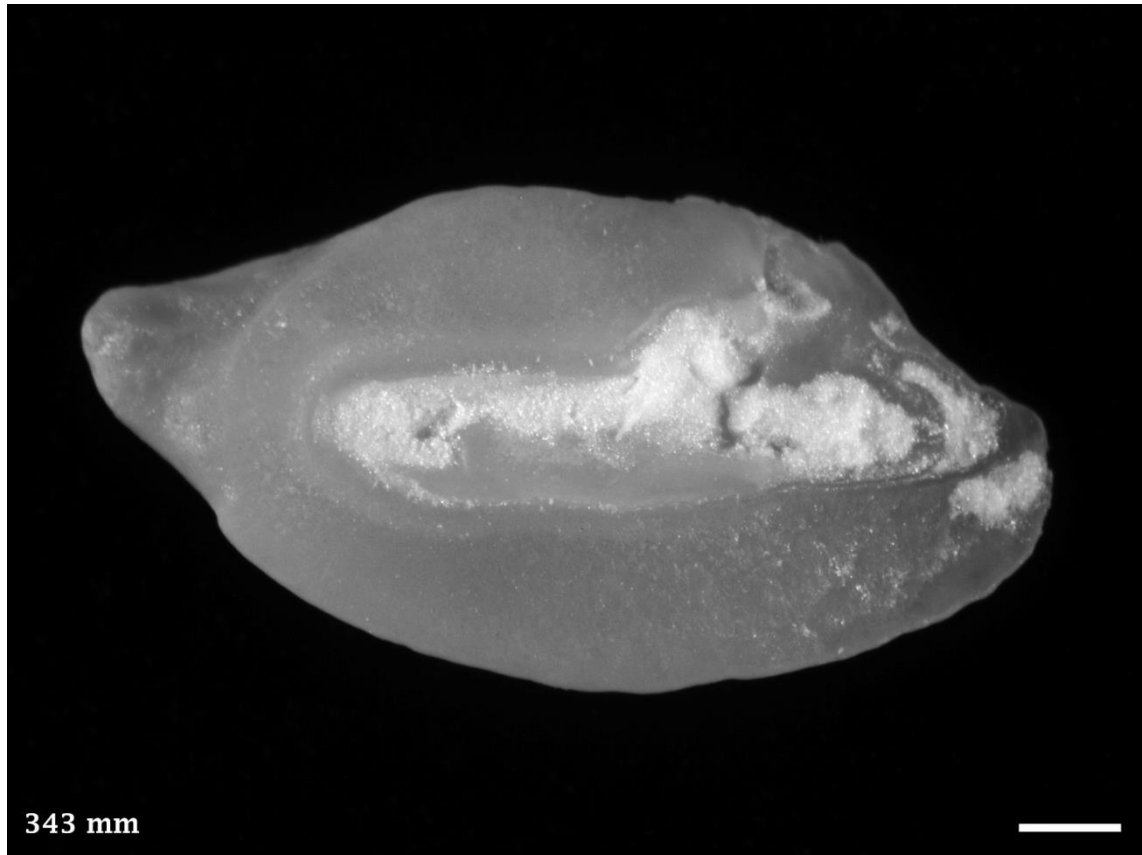


Distribution and Length: Reefs from Kalbarri, WA south to Albany, WA. 760 mm TL.



5.4 *Gnathophis longicauda*, Little Conger

ANGUILLIFORMES CONGRIDAE (Conger Eels)

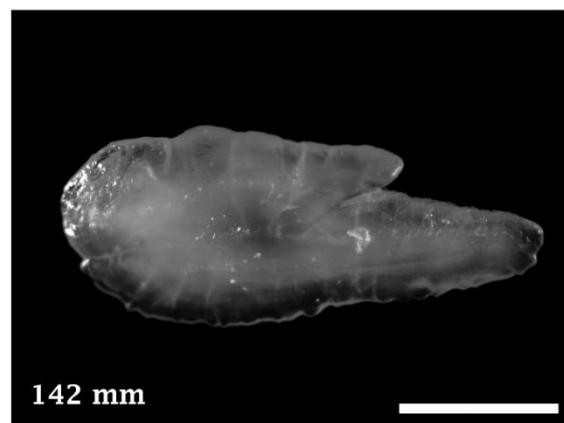
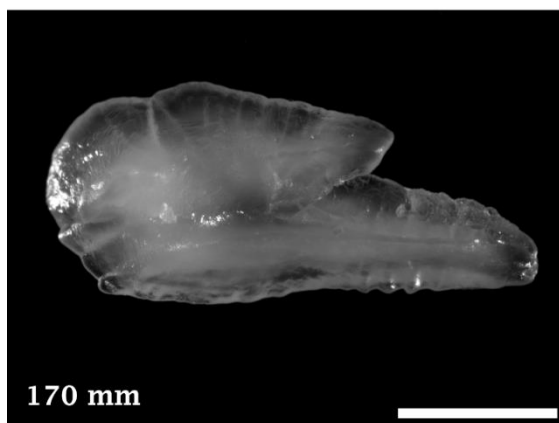
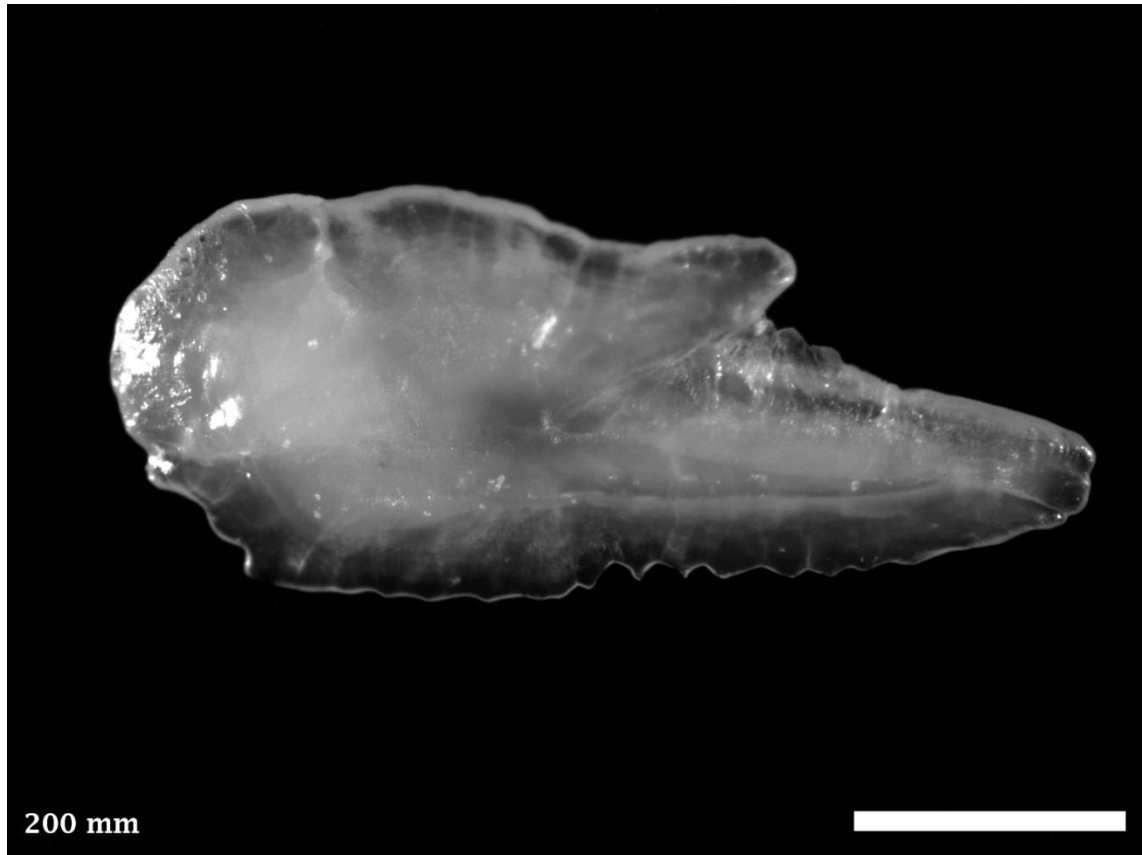


Distribution and Length: Coastal waters from Houtman Abrolhos, WA south around to northern New South Wales. 410 mm TL.



5.5 *Etrumeus jacksoniensis*, Maray

CLUPEIFORMES CLUPEIDAE (Herrings)

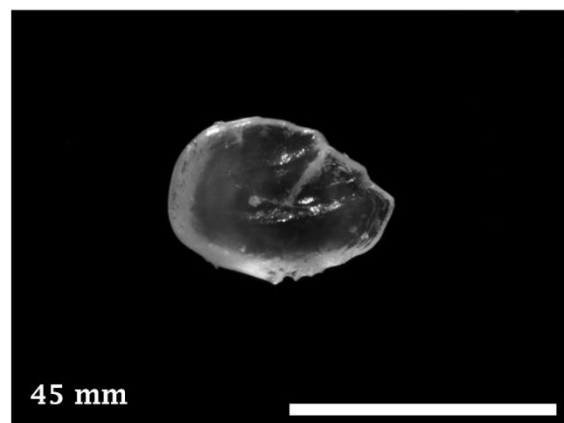
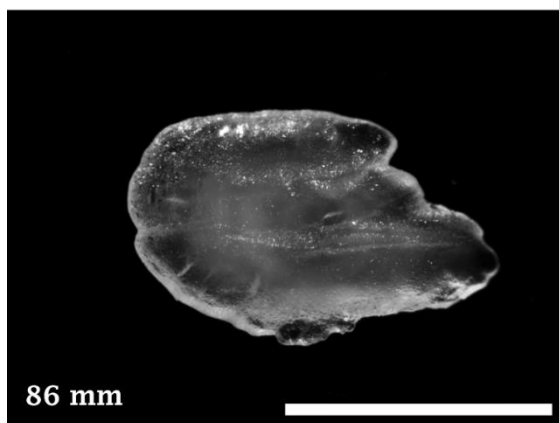
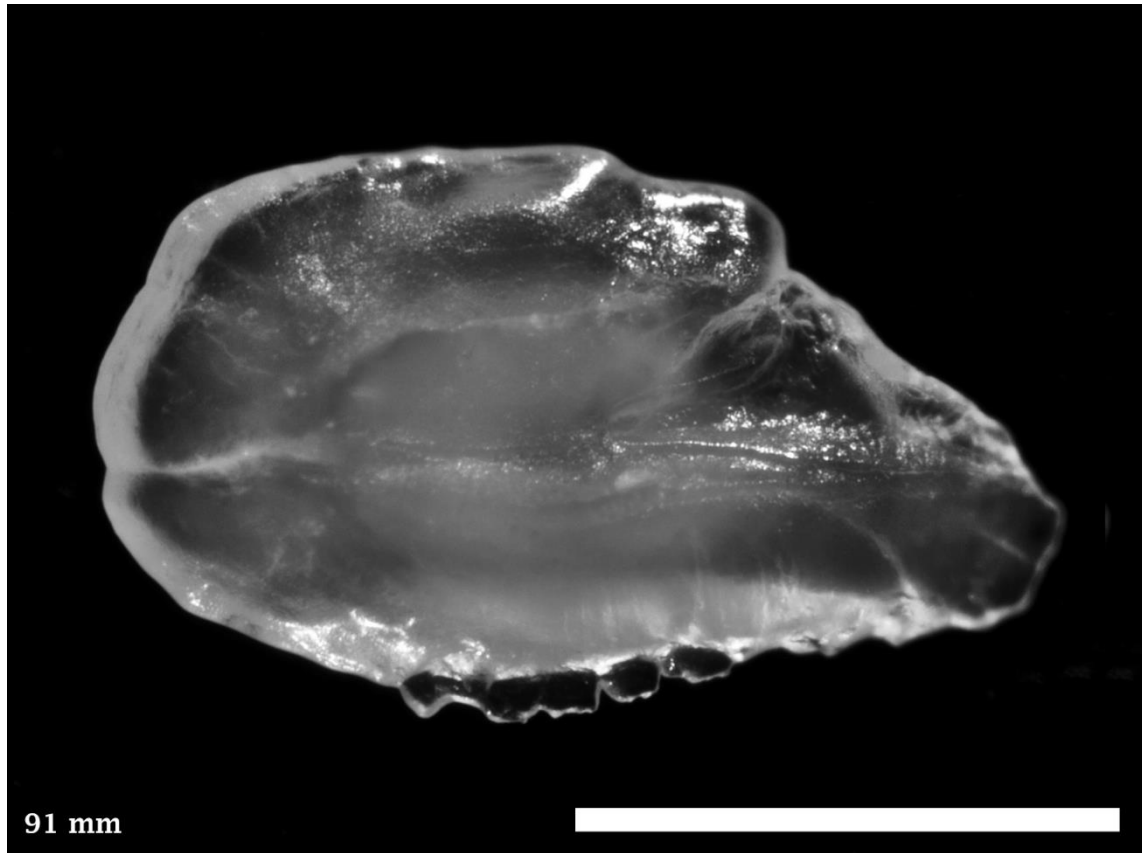


Distribution and Length: Offshore waters, sometimes found closer to the coast from Fremantle, WA south around to southern Queensland, including Tasmania. 280 mm TL.



5.6 *Hyperlophus vittatus*, Sandy Sprat

CLUPEIFORMES CLUPEIDAE (Herrings)

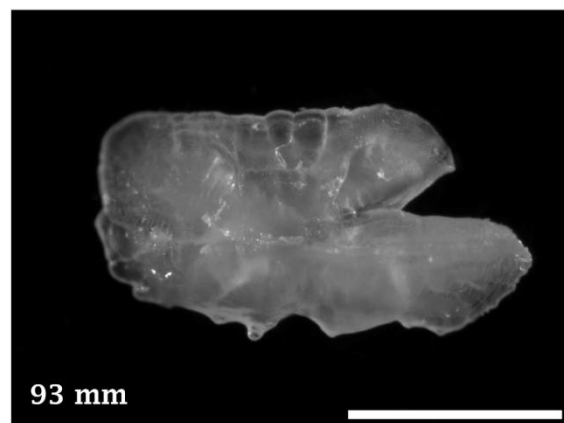
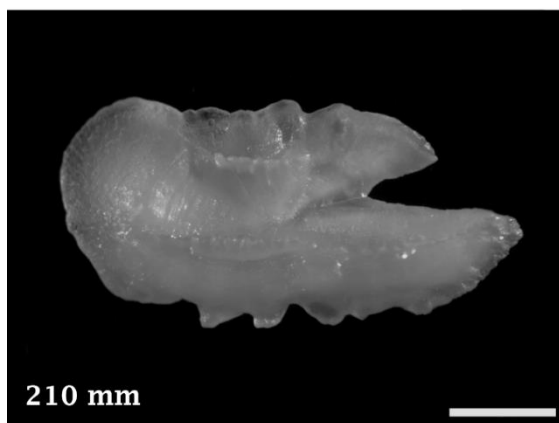
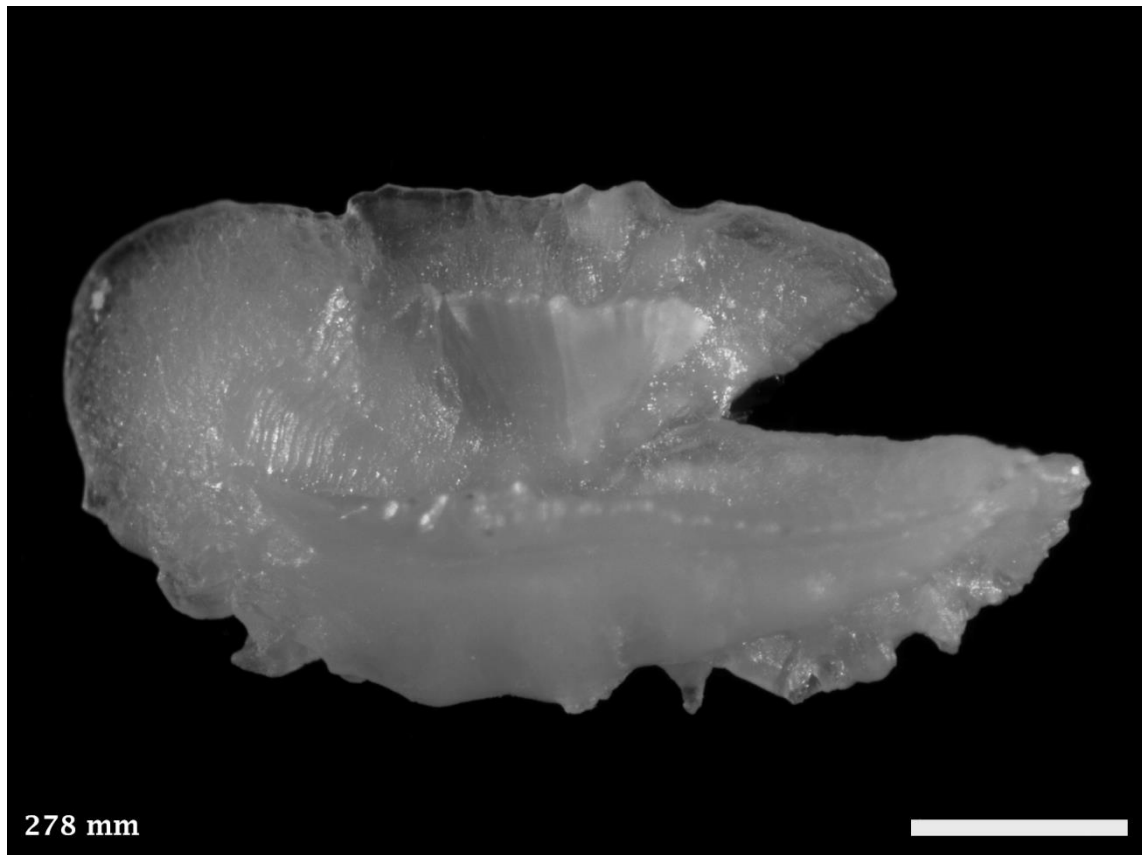


Distribution and Length: Estuarine and coastal waters from Kalbarri, WA south around to southern Queensland. 100 mm SL.



5.7 *Nematalosa vlaminghi*, Perth Herring

CLUPEIFORMES CLUPEIDAE (Herrings)

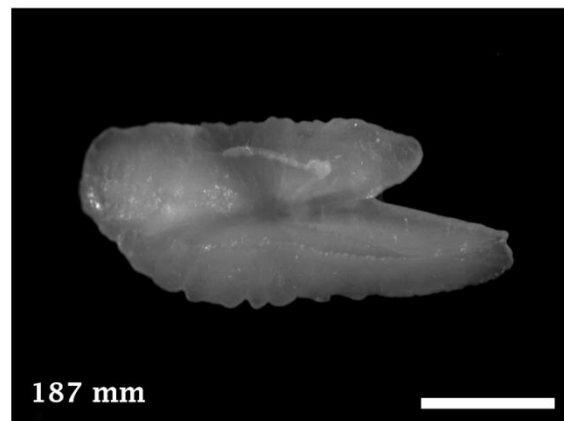
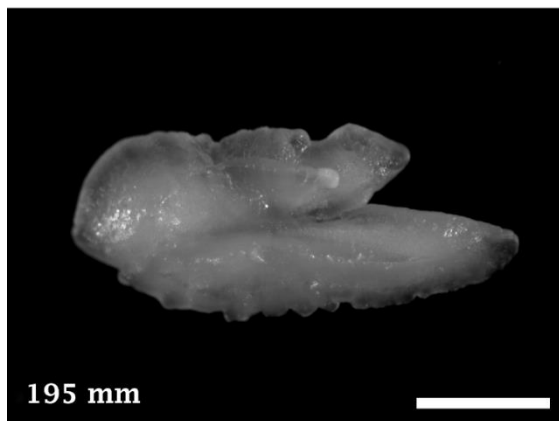
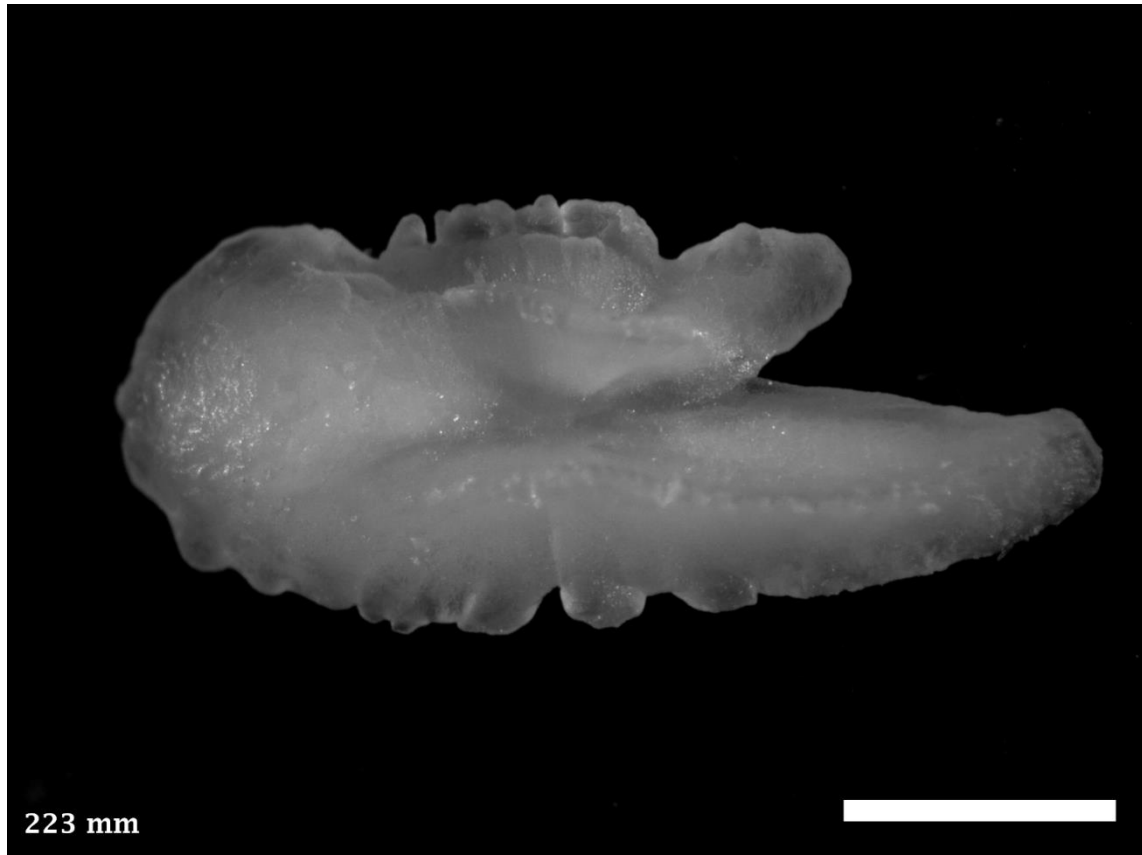


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south to Bunbury, WA. 360 mm TL.



5.8 *Sardinella lemuru*, Scaly Mackerel

CLUPEIFORMES CLUPEIDAE (Herrings)

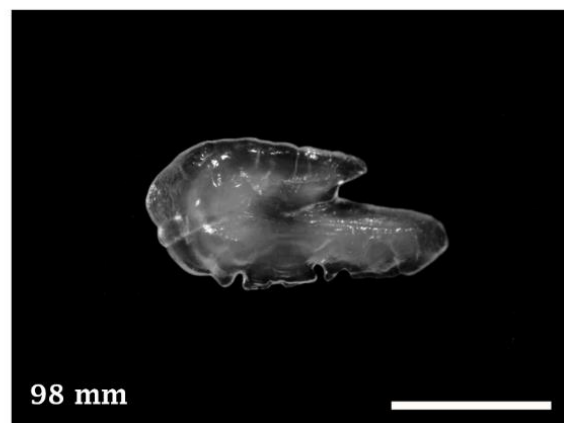
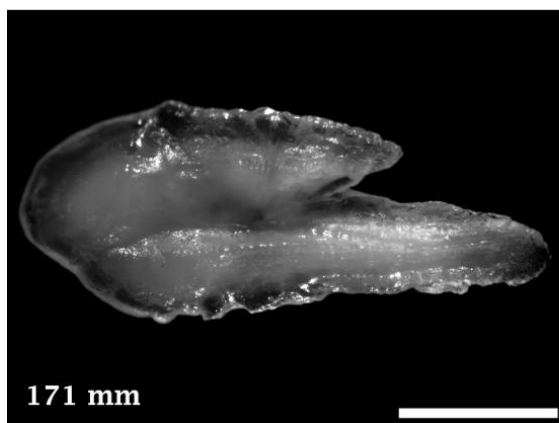


Distribution and Length: Estuarine and coastal waters from Port Headland, WA south to Albany, WA. 240 mm TL.



5.9 *Sardinops sagax*, Australian Sardine

CLUPEIFORMES CLUPEIDAE (Herrings)

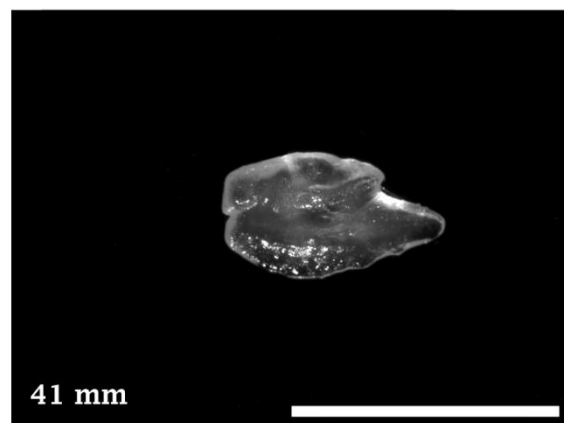
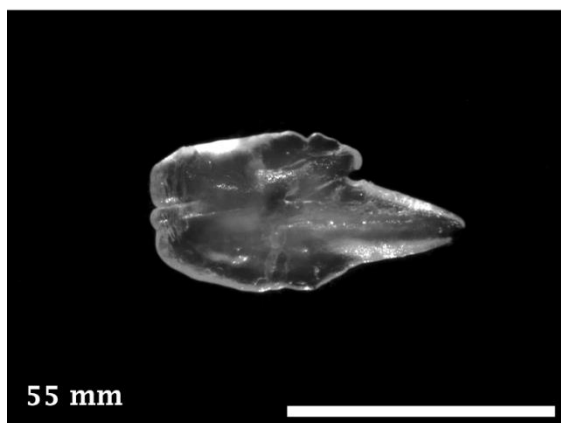
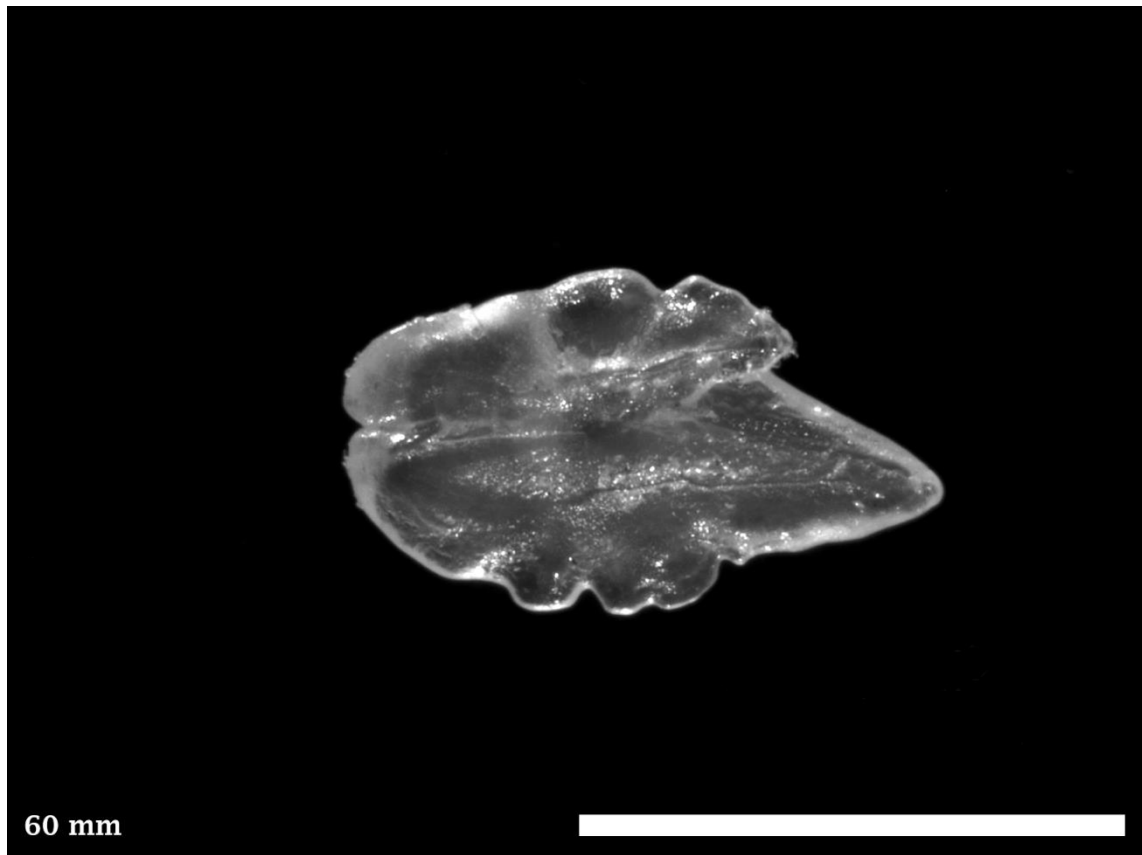


Distribution and Length: Coastal waters from Shark Bay, WA south around to southern Queensland, including Tasmania. 300 mm TL.



5.10 *Spratelloides robustus*, Blue Sprat

CLUPEIFORMES CLUPEIDAE (Herrings)

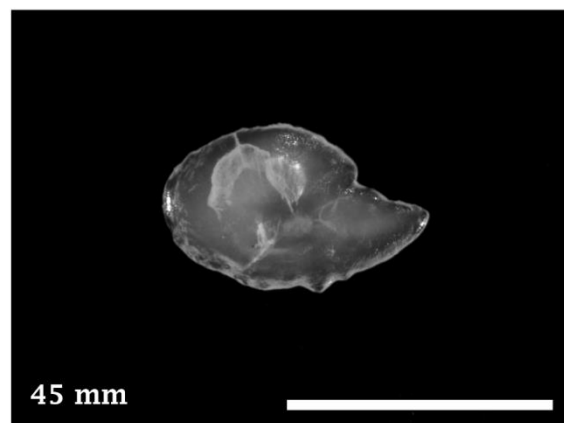
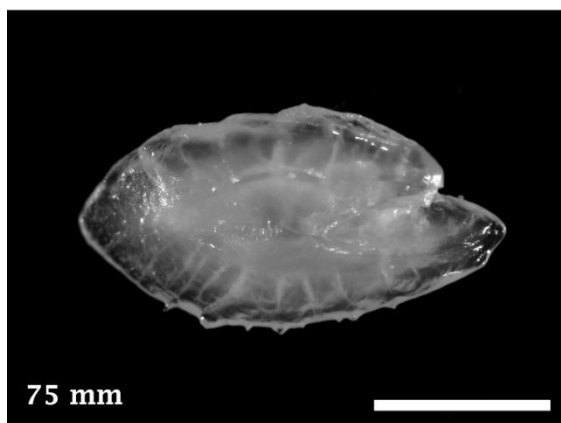
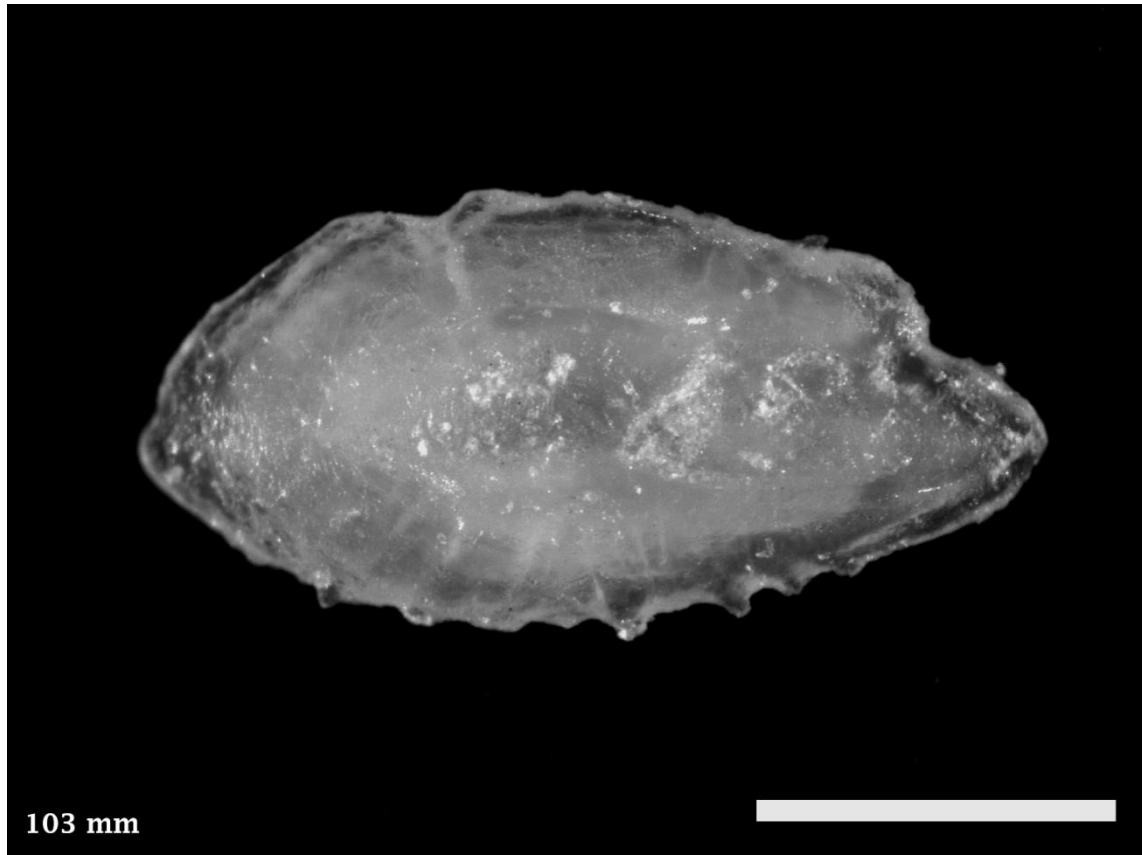


Distribution and Length: Estuarine and coastal waters from Dampier Archipelago, WA south to mid-north Queensland, including Tasmania. 120 mm SL.



5.11 *Engraulis australis*, Australian Anchovy

CLUPEIFORMES ENGRAULIDAE (Anchovies)

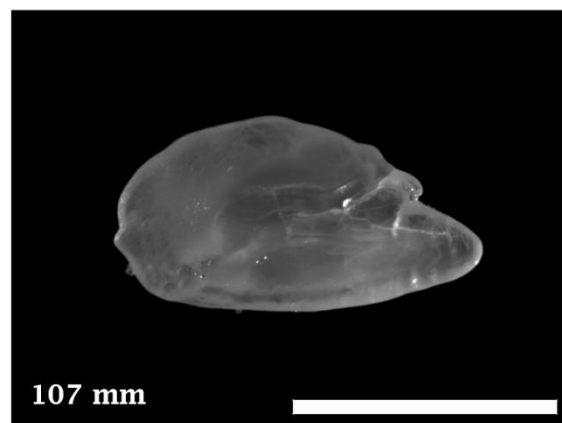
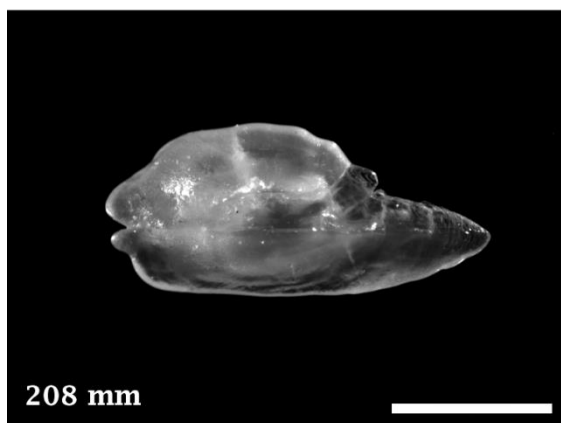


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south to southern Queensland, including Tasmania. 150 mm SL.



5.12 *Gonorynchus greyi*, Beaked Salmon

GONORYNCHIFORMES GONORYNCHIDAE (Beaked Salmons)

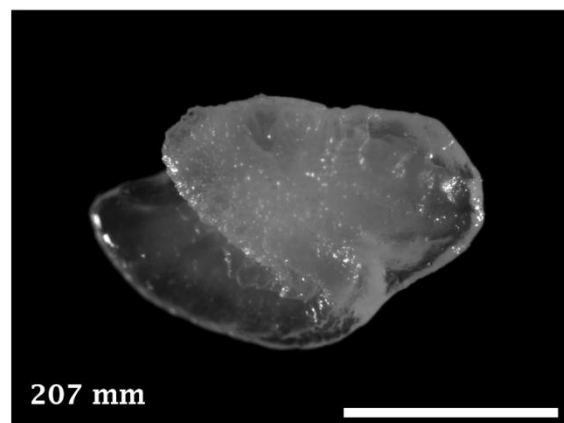
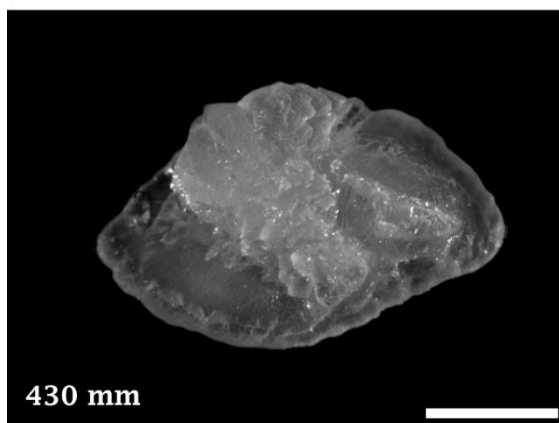
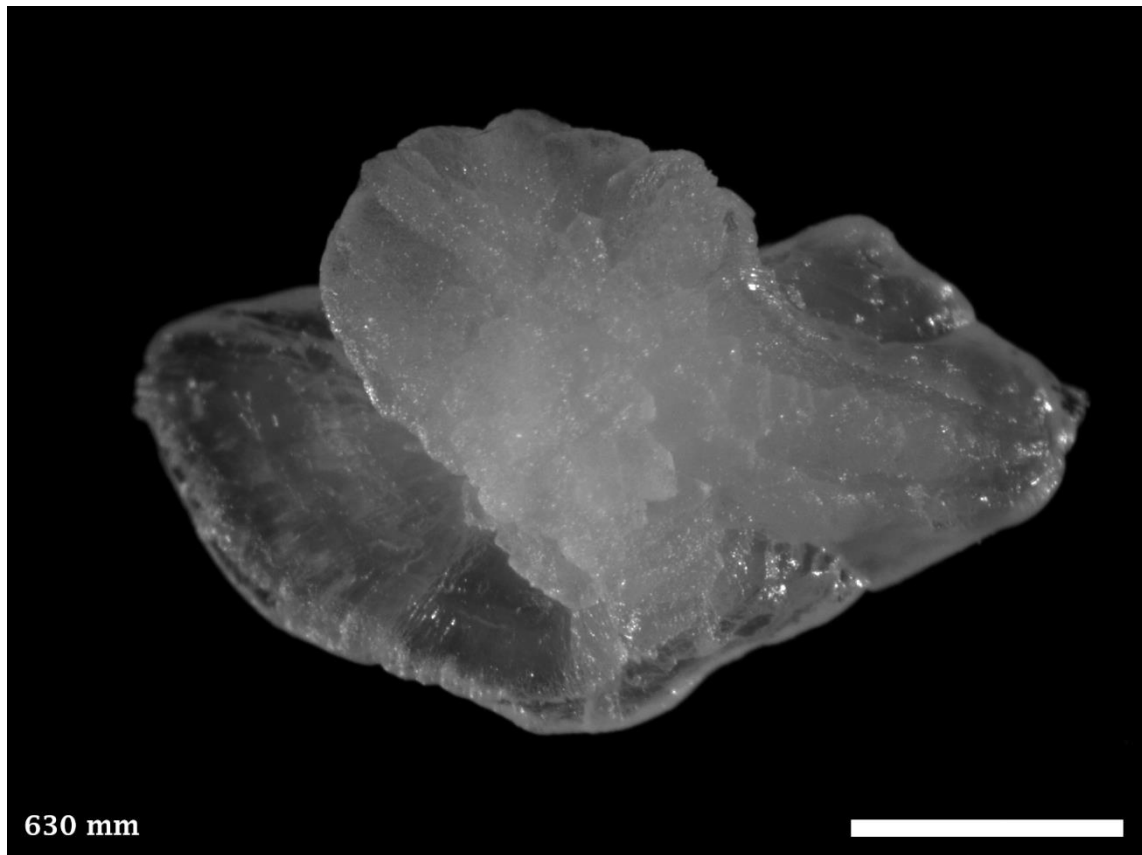


Distribution and Length: Estuarine, coastal and offshore waters from Shark Bay, WA south around to southern Queensland, including Tasmania. 500 mm SL.



5.13 *Cnidoglanis macrocephalus*, Estuary Cobbler

SILURIFORMES PLOTOSIDAE (Eeltail Catfishes)

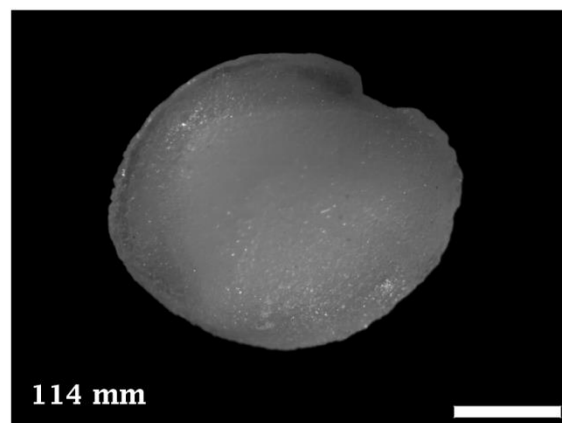
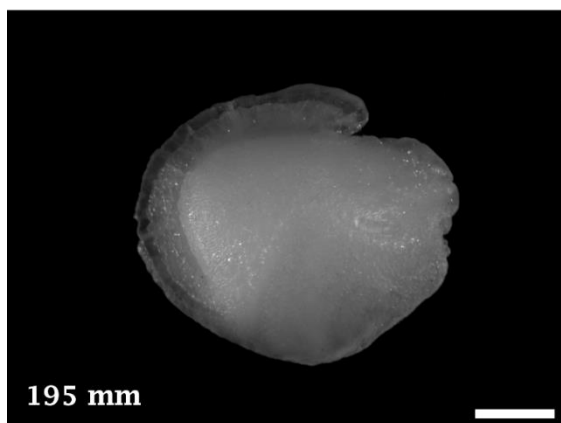
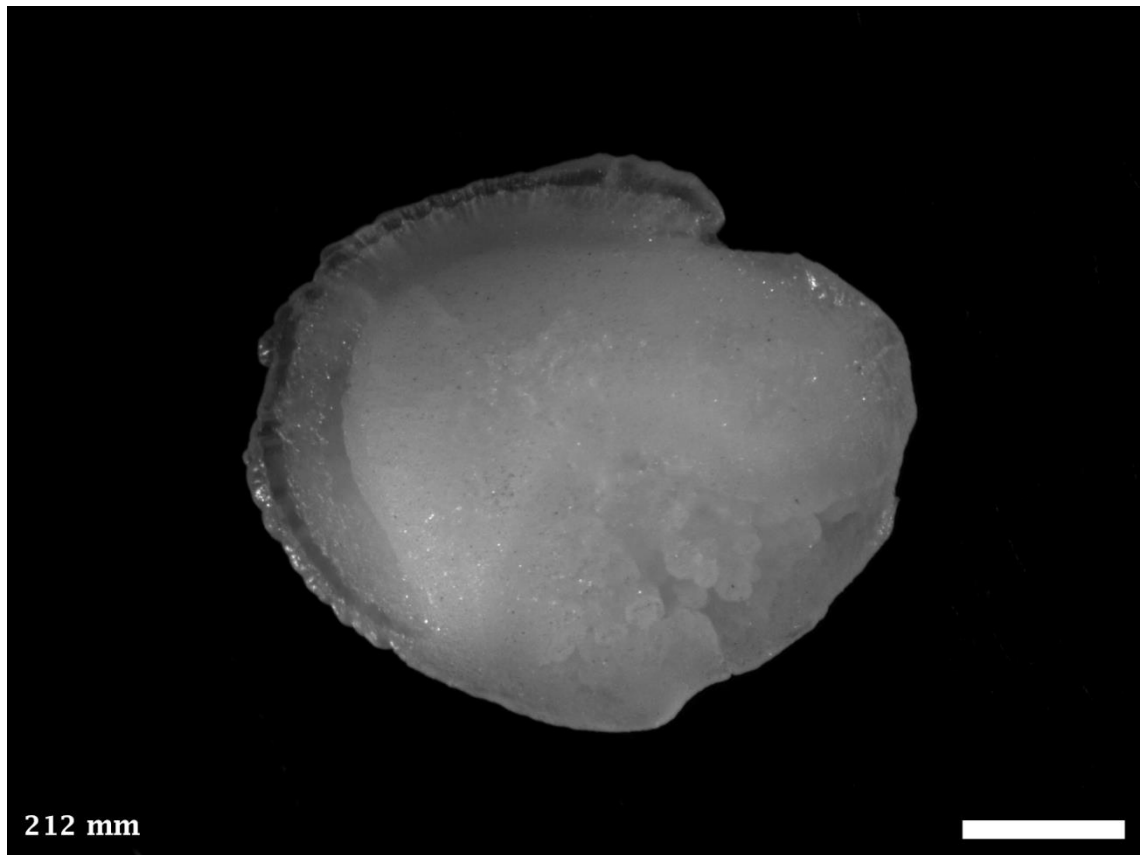


Distribution and Length: Estuarine and coastal waters from Houtman Abrolhos, WA south around to southern Queensland, including northern Tasmania. Note: Lapillus otoliths are shown. 910 mm TL.



5.14 *Plotosus lineatus*, Striped Catfish

SILURIFORMES PLOTOSIDAE (Eeltail Catfishes)

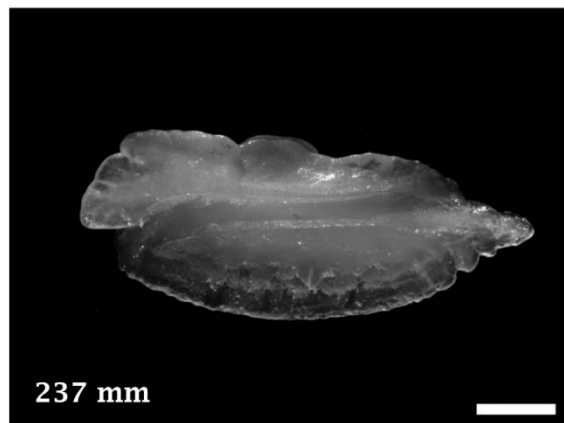
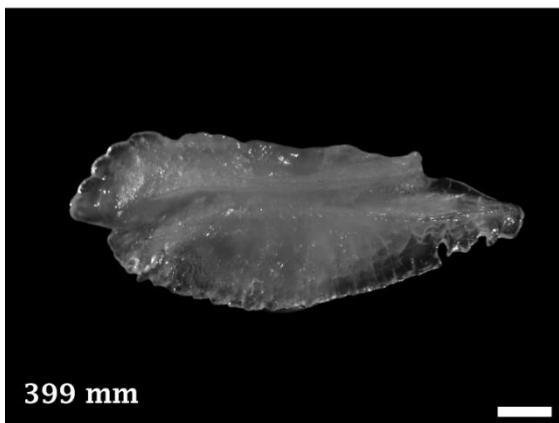
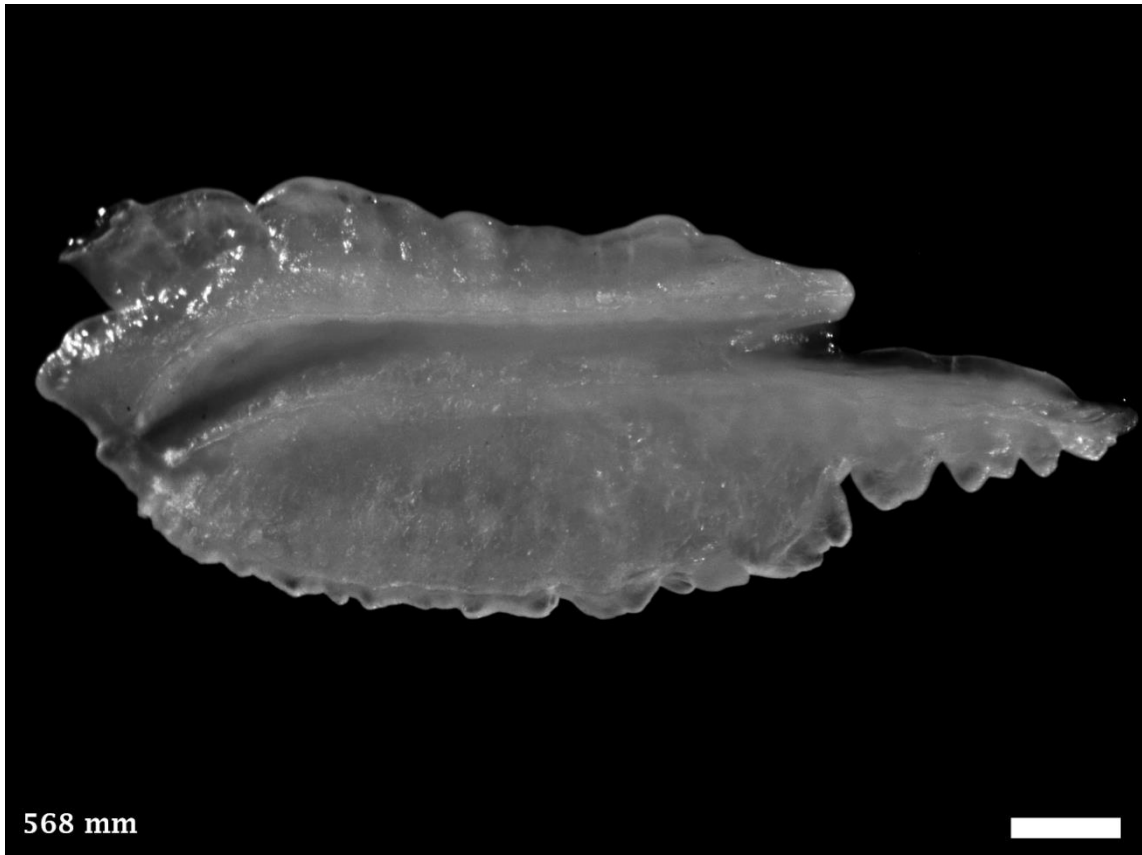


Distribution and Length: Reefs, estuarine and coastal waters from Esperance, WA north around to Sydney, NSW. Note: Lapillus otoliths are shown. 350 mm TL.



5.15 *Latropiscis purpurissatus*, Sergeant Baker

AULOPIFORMES AULOPIDAE (Threadsails)

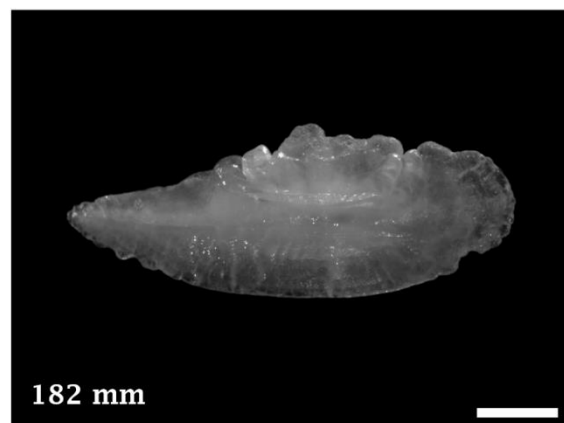
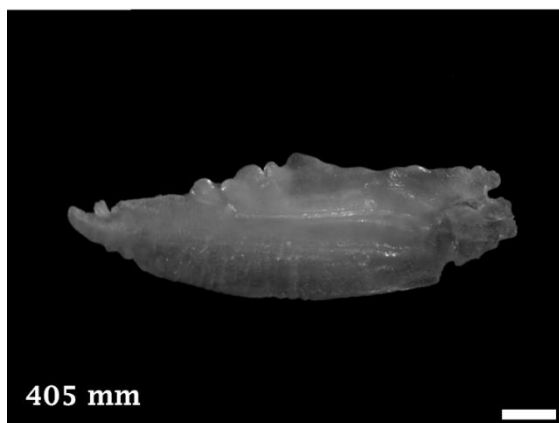
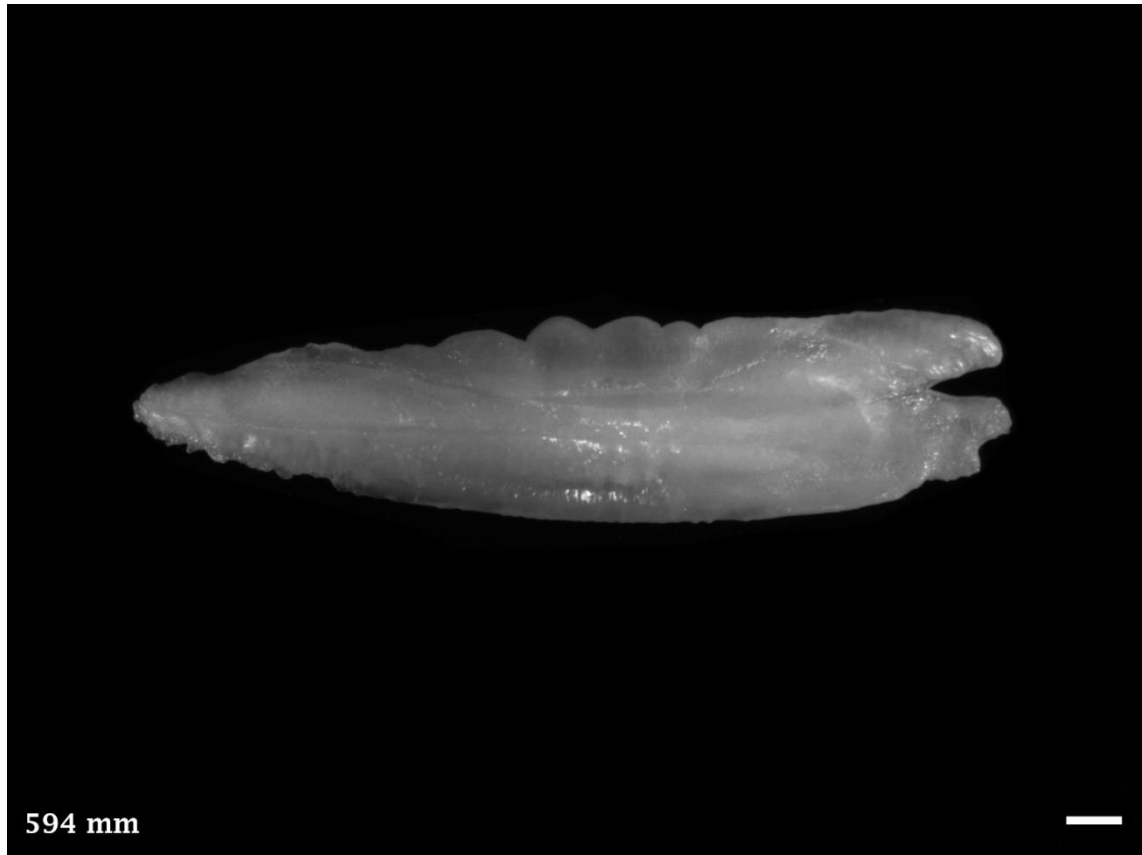


Distribution and Length: Coastal waters from Coral Bay, WA south around to southern Queensland, including Tasmania. 690 mm TL.



5.16 *Saurida undosquamis*, Largescale Saury

AULOPIFORMES SYNODONTIDAE (Lizardfishes)

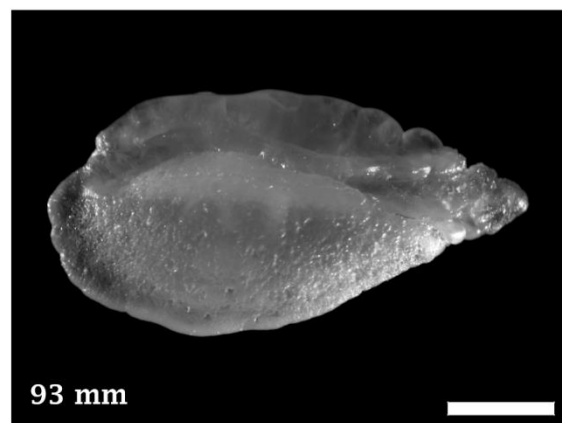
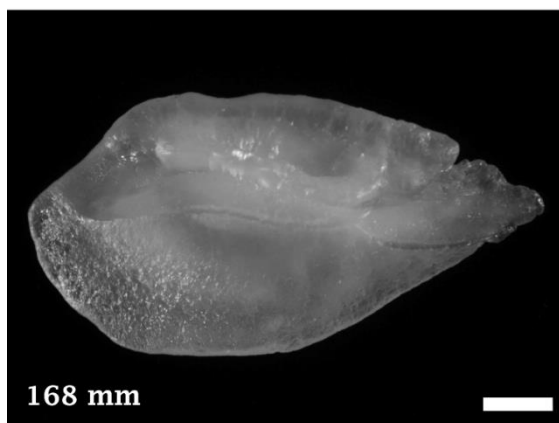
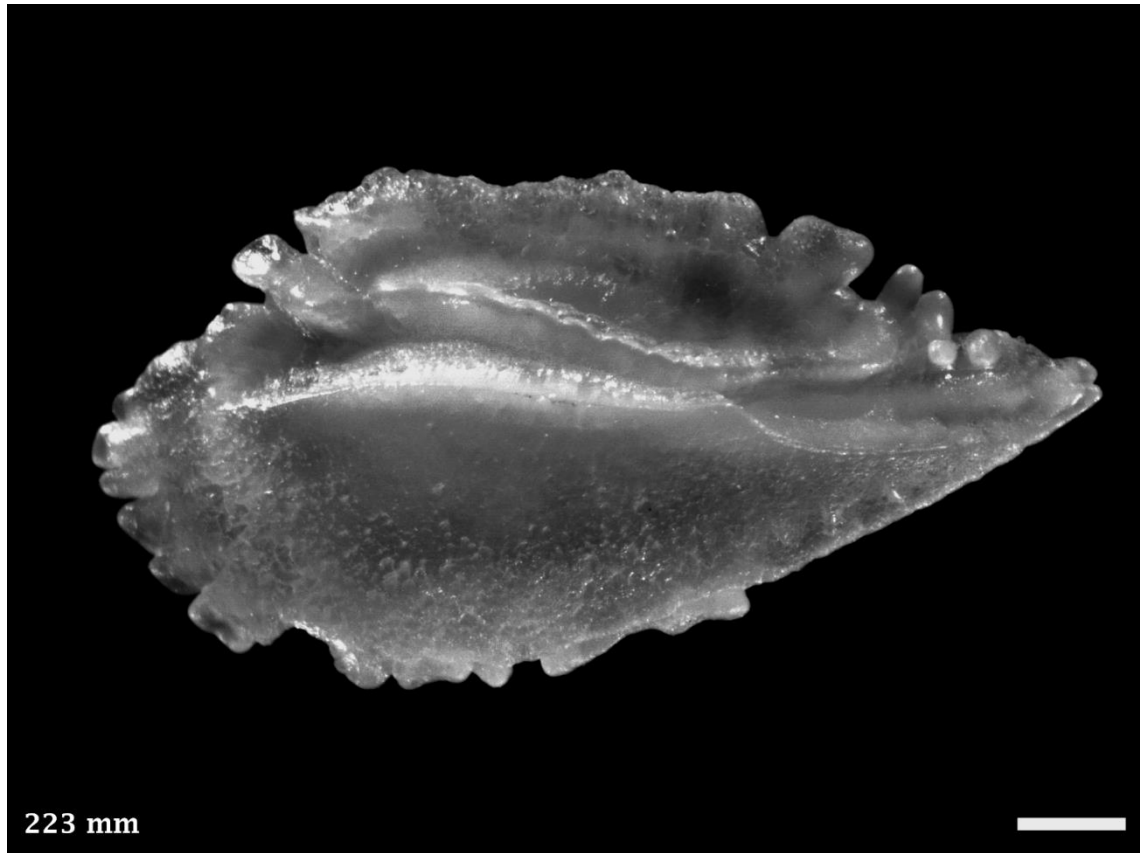


Distribution and Length: Coastal and offshore waters from Venus Bay, SA west and north around to Sydney, NSW. Note: Right otoliths. 630 mm TL.



5.17 *Trachinocephalus trachinus*, Painted Grinner

AULOPIFORMES SYNODONTIDAE (Lizardfishes)

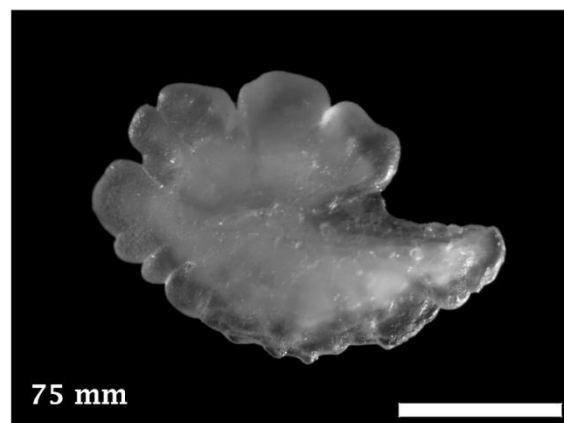
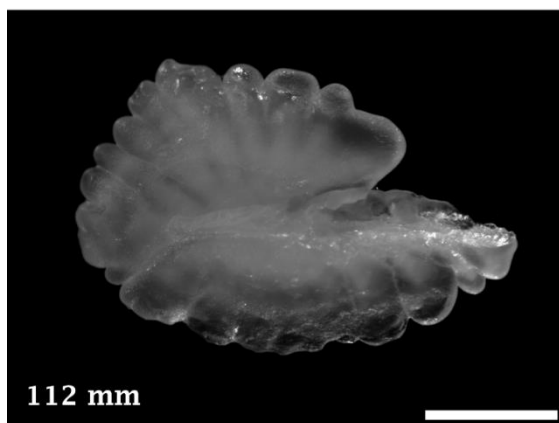
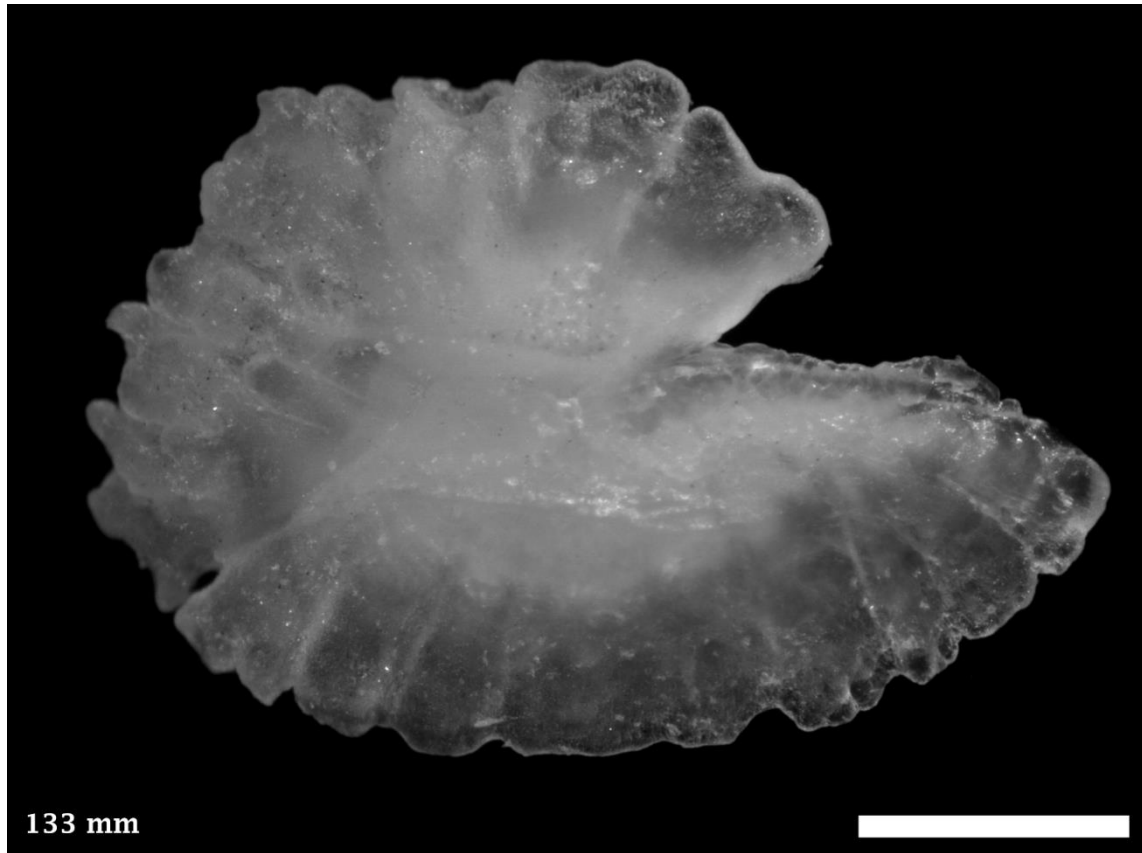


Distribution and Length: Estuarine, coastal and offshore waters from Geographe Bay, WA north around to Wilsons Promontory, Victoria. 660 mm TL.



5.18 *Metavelifer multiradiatus*, Common Veilfin

LAMPRIDIFORMES VELIFERIDAE (Veilfins)

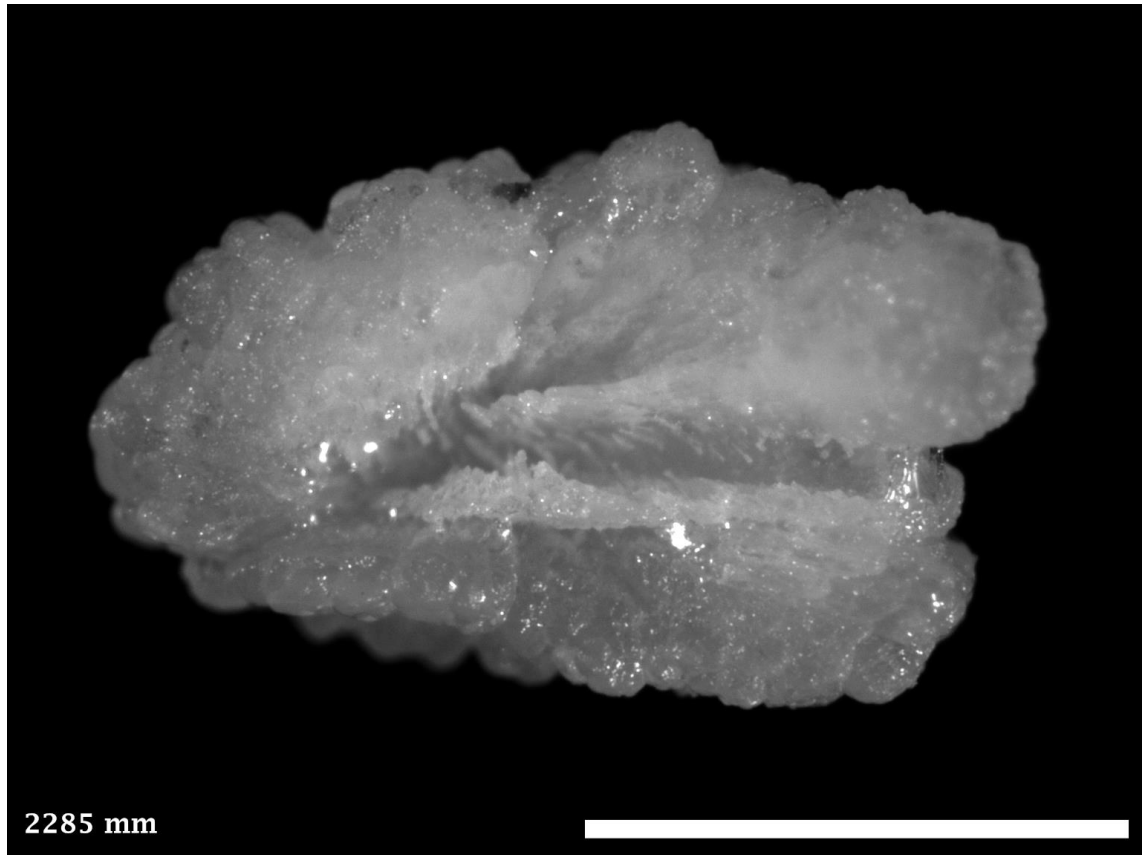


Distribution and Length: Estuarine, coastal and offshore waters from Exmouth, WA south around to Great Australian Bight, SA and New South Wales. 490 mm SL.



5.19 *Regalecus glesne*, Oarfish

LAMPRIDIFORMES REGALECIDAE (Oarfishes)

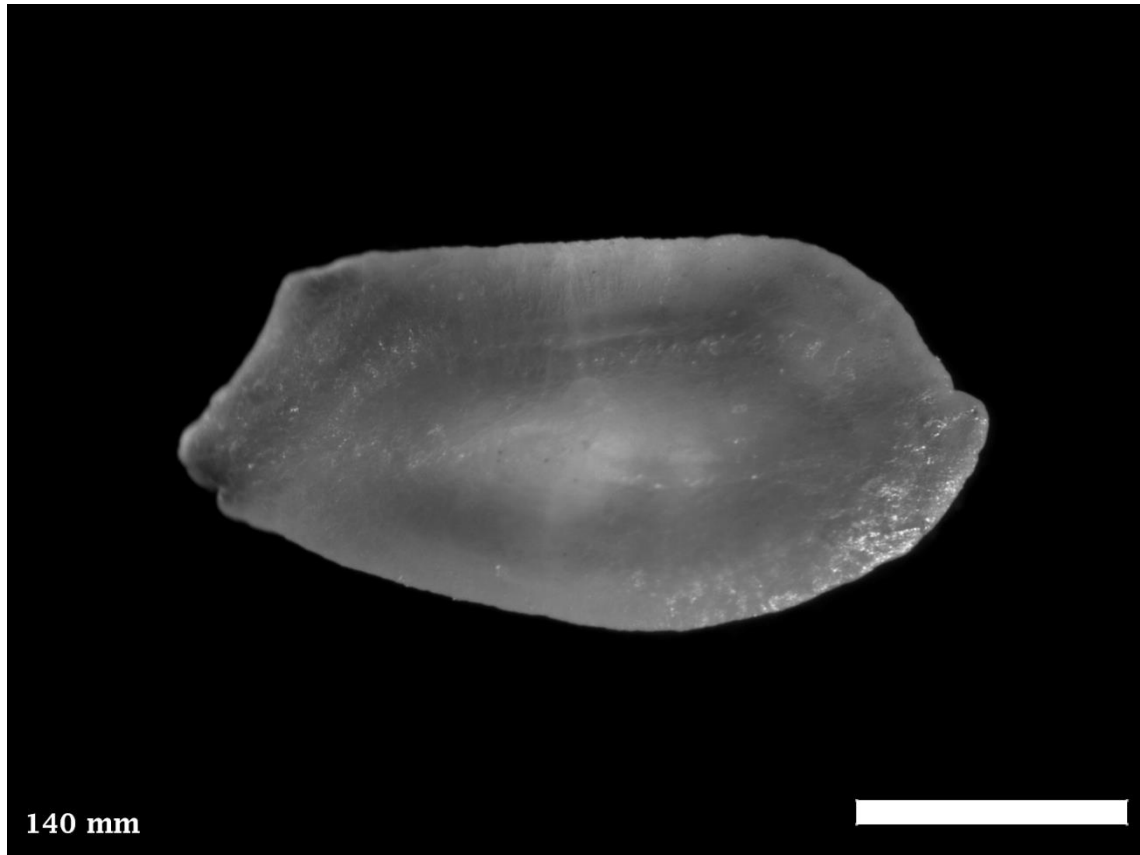


Distribution and Length: Oceanic waters circum-Australia. 8000 mm SL.



5.20 *Dipulus caecus*, Orange Eelpout

OPHIDIIFORMES DINEMATICHTHYIDAE

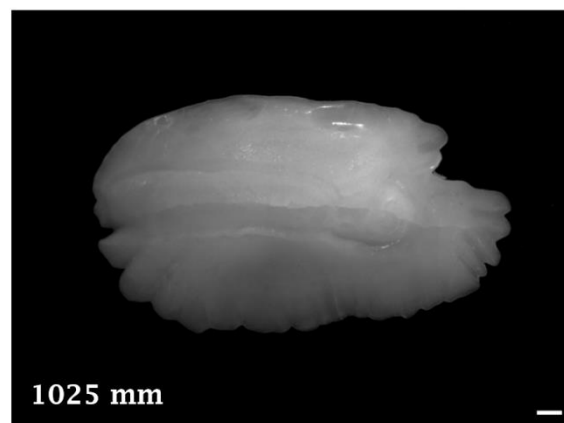
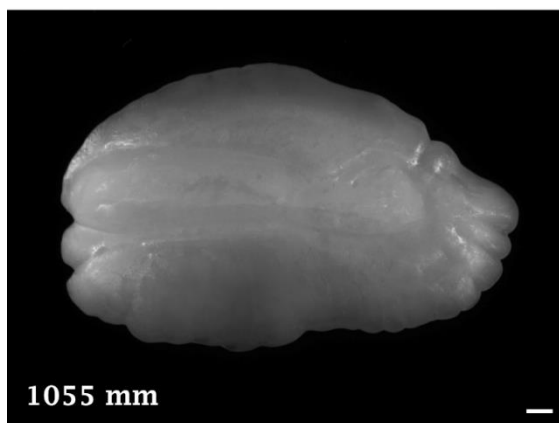
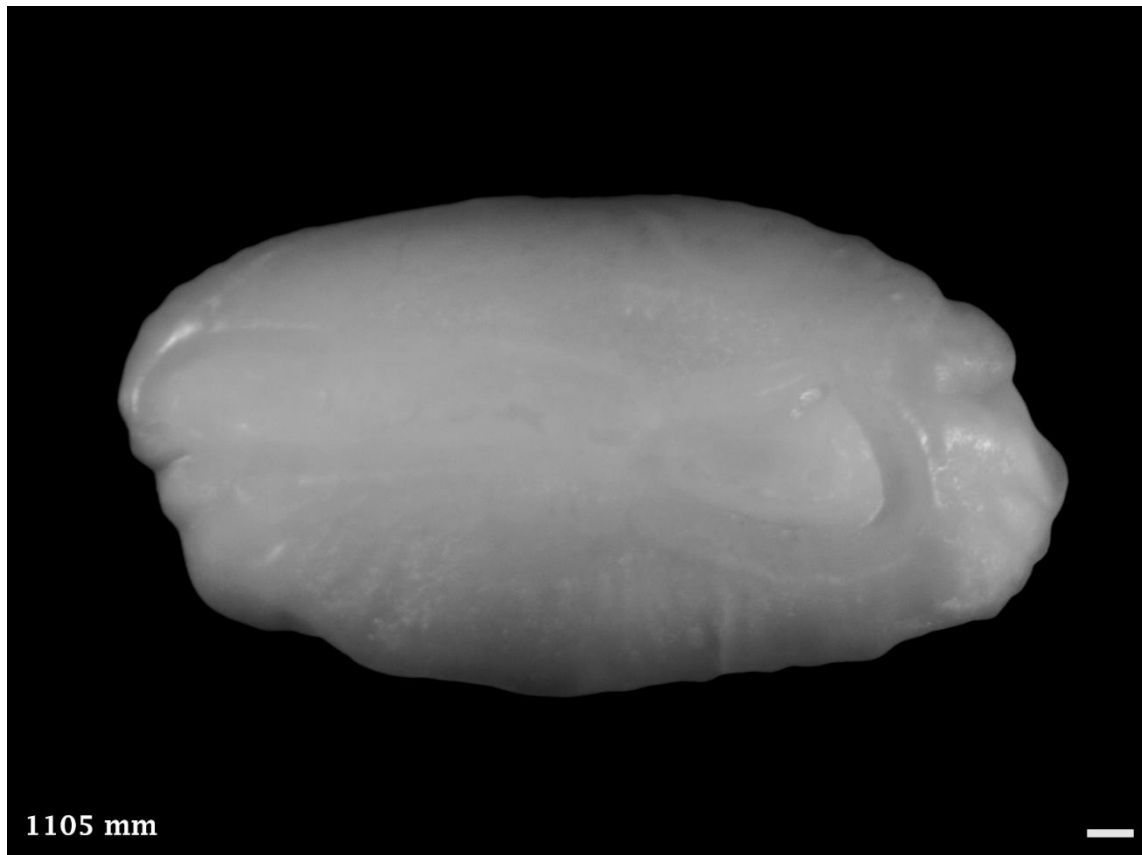


Distribution and Length: Demersal offshore waters from Bunbury, WA south around to Newcastle, NSW, including Tasmania. 200 mm SL.



5.21 *Genypterus blacodes*, Pink Ling

OPHIDIIFORMES OPHIDIIDAE (Cusk Eels)

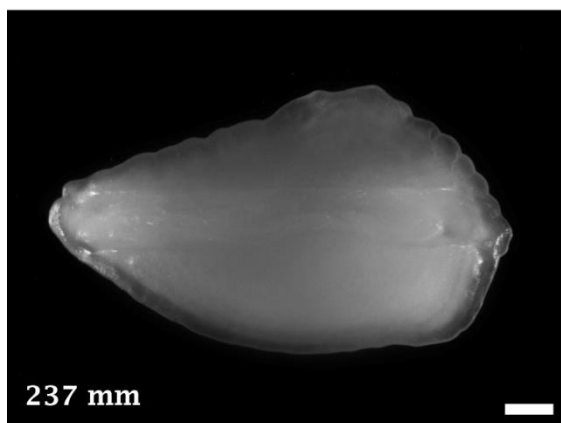
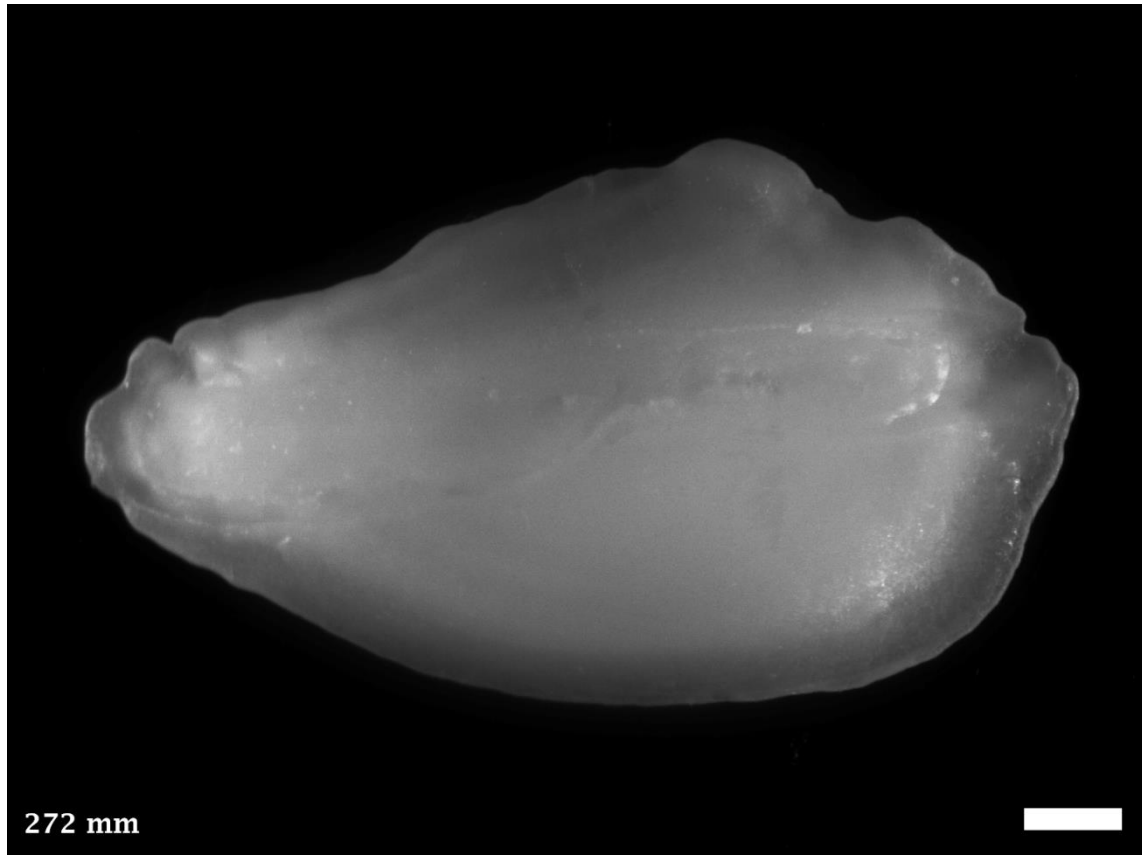


Distribution and Length: Demersal offshore waters from Bunbury, WA south around to Newcastle, NSW, including Tasmania. 2000 mm SL.



5.22 *Coelorinchus mirus*, Gargoyle Fish

GADIFORMES MACROURIDAE (Whiptails)

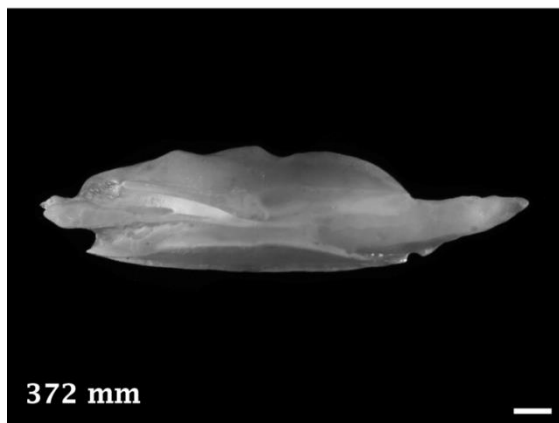
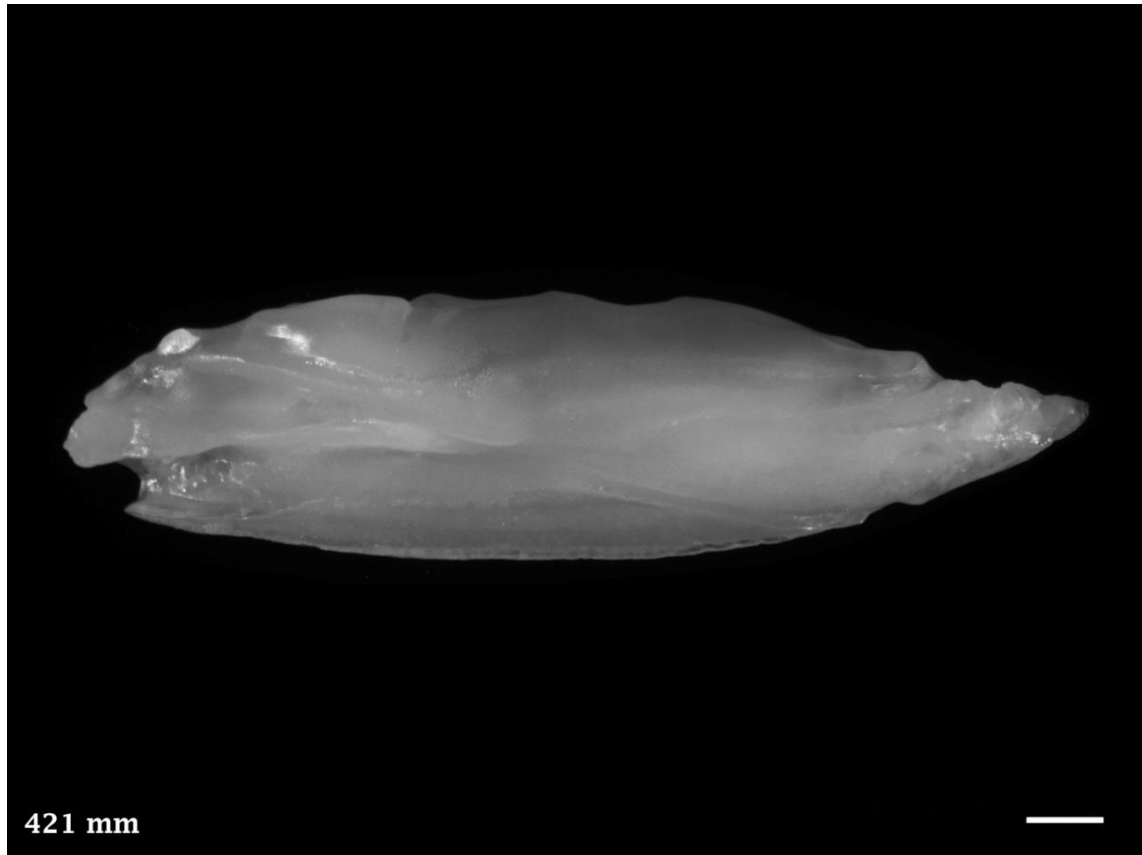


Distribution and Length: Demersal offshore waters from Shark Bay, WA south around to southern Queensland, including Tasmania. 300 mm TL.



5.23 *Lotella rhacina*, Largetooth Beardie

PERCIFORMES MORIDAE (Morid Cods)

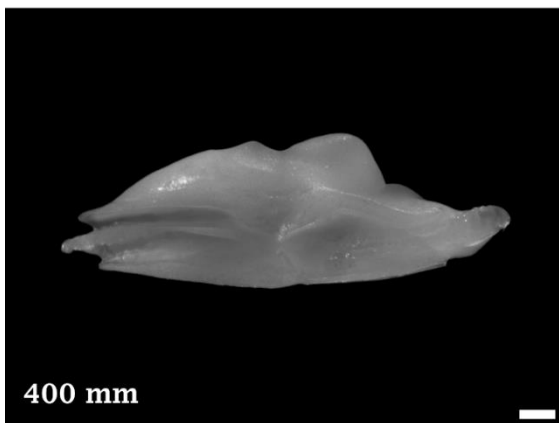
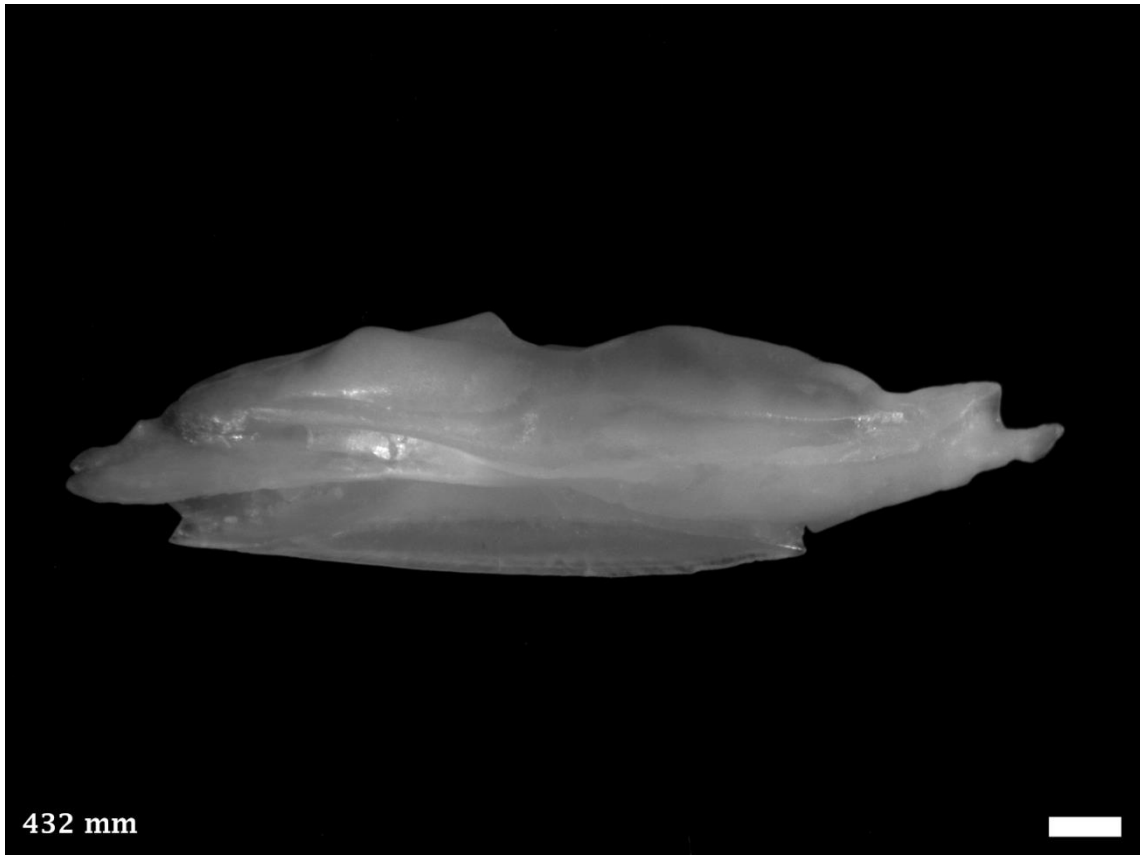


Distribution and Length: Coastal reefs from Lancelin, WA south around to Byron Bay, NSW, including Tasmania. 660 mm TL.



5.24 *Pseudophycis barbata*, Bearded Rock Cod

GADIFORMES MORIDAE (Morid Cods)

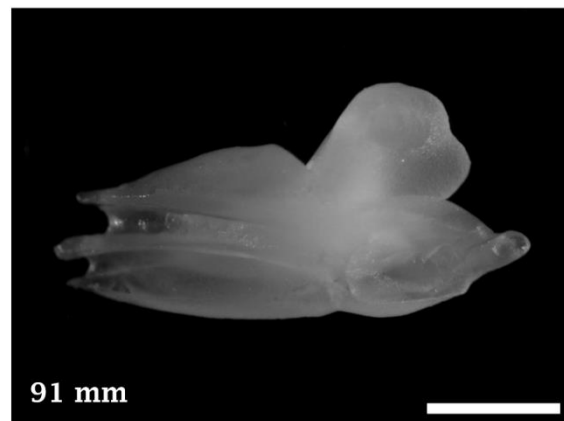
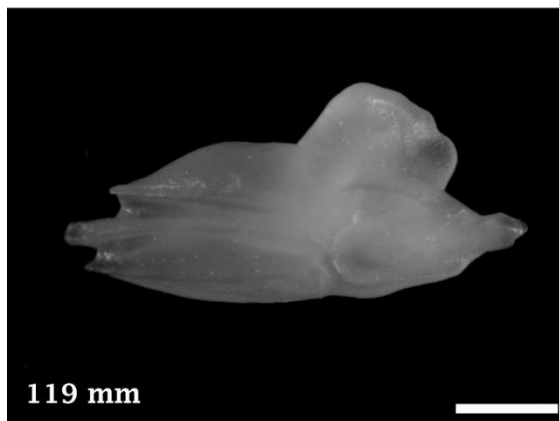
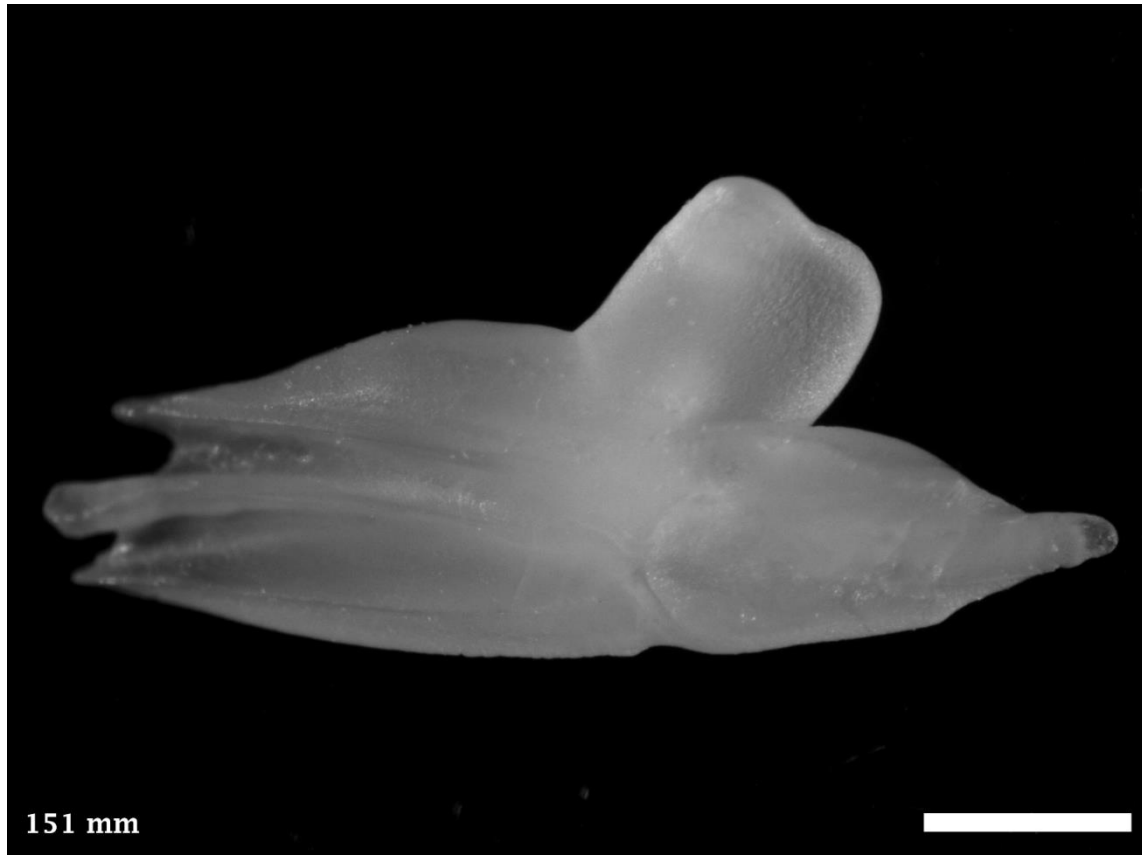


Distribution and Length: Coastal waters and reefs from Fremantle, WA south around to Sydney, including Tasmania. 700 mm TL.



5.25 *Pseudophycis breviuscula*, Bastard Red Cod

GADIFORMES MORIDAE (Morid Cods)

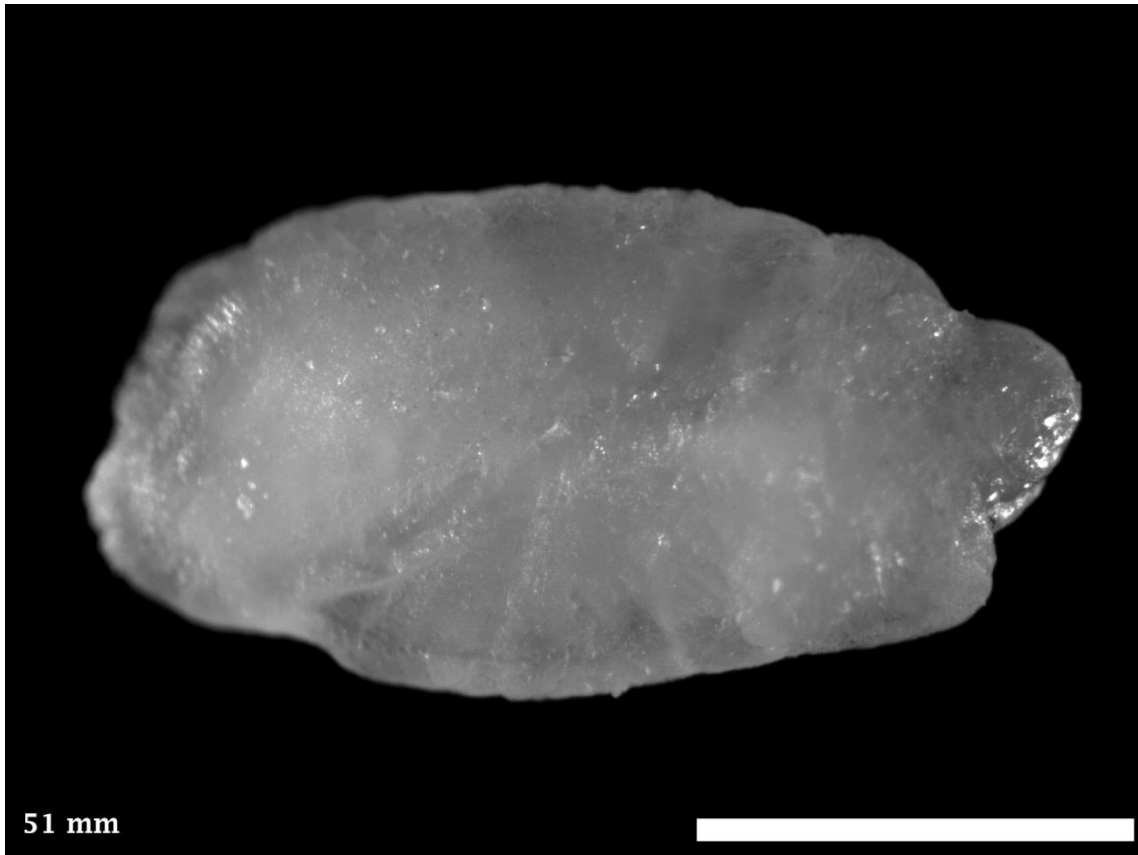


Distribution and Length: Coastal and offshore waters from Rottnest Island, WA south around to southern Queensland, including Tasmania. 220 mm SL.



5.26 *Echinophryne crassispina*, Prickly Anglerfish

LOPHIIFORMES ANTENNARIIDAE (Frogfishes)

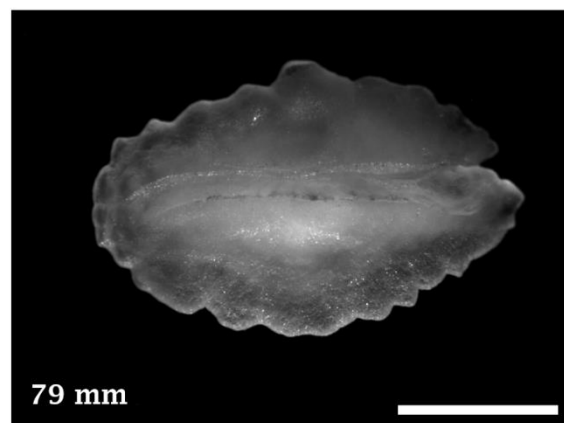
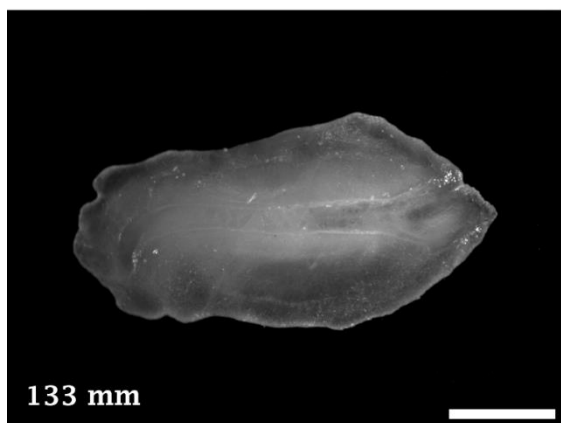
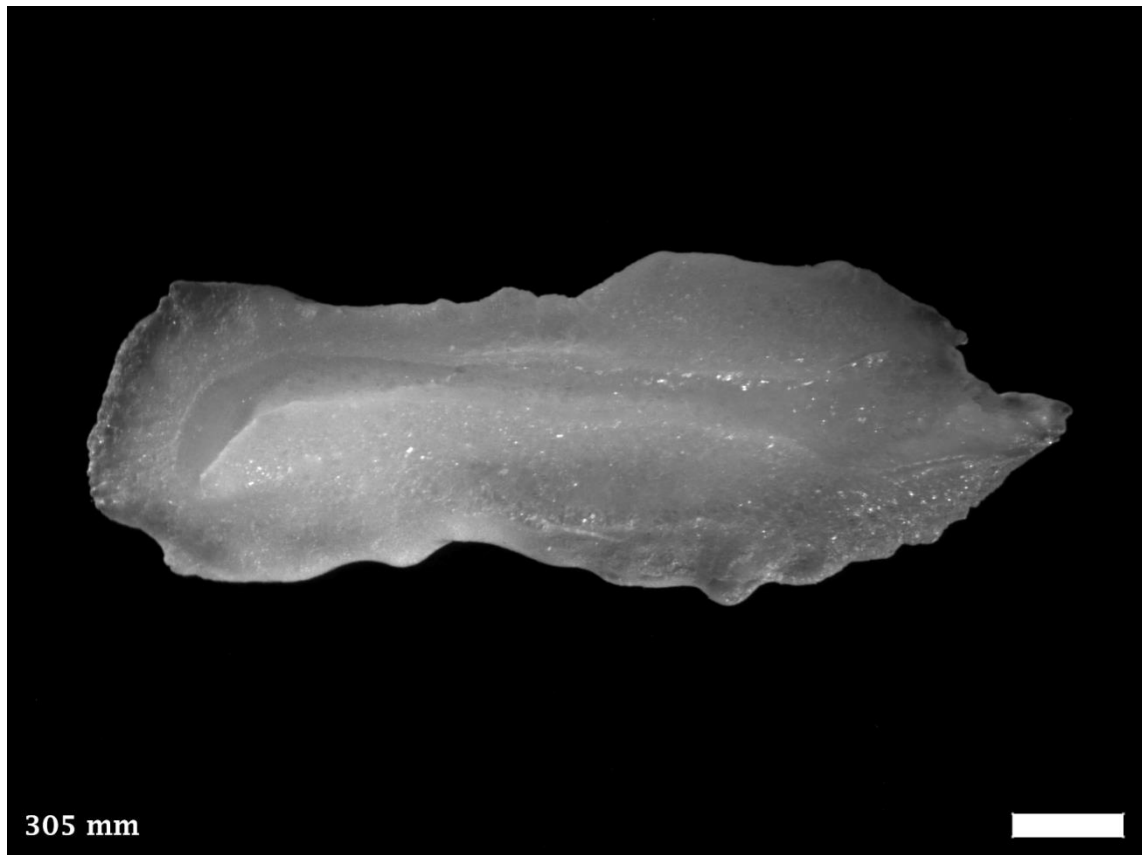


Distribution and Length: Coastal reefs from Albany, WA around to southern NSW. 70 mm SL.



5.27 *Aldrichetta forsteri*, Yelloweye Mullet

MUGILIFORMES MUGILIDAE (Mullet)

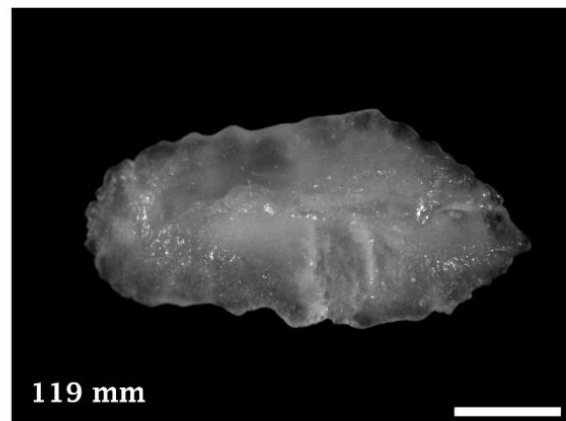
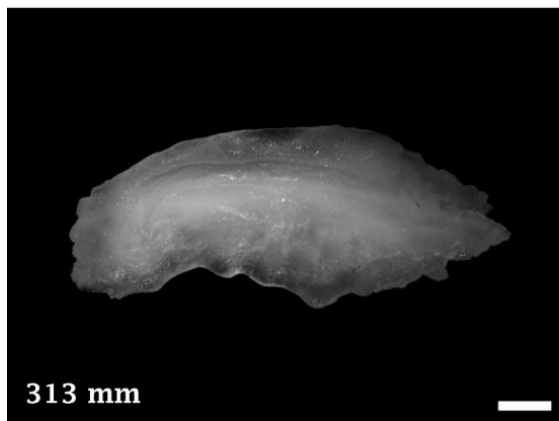
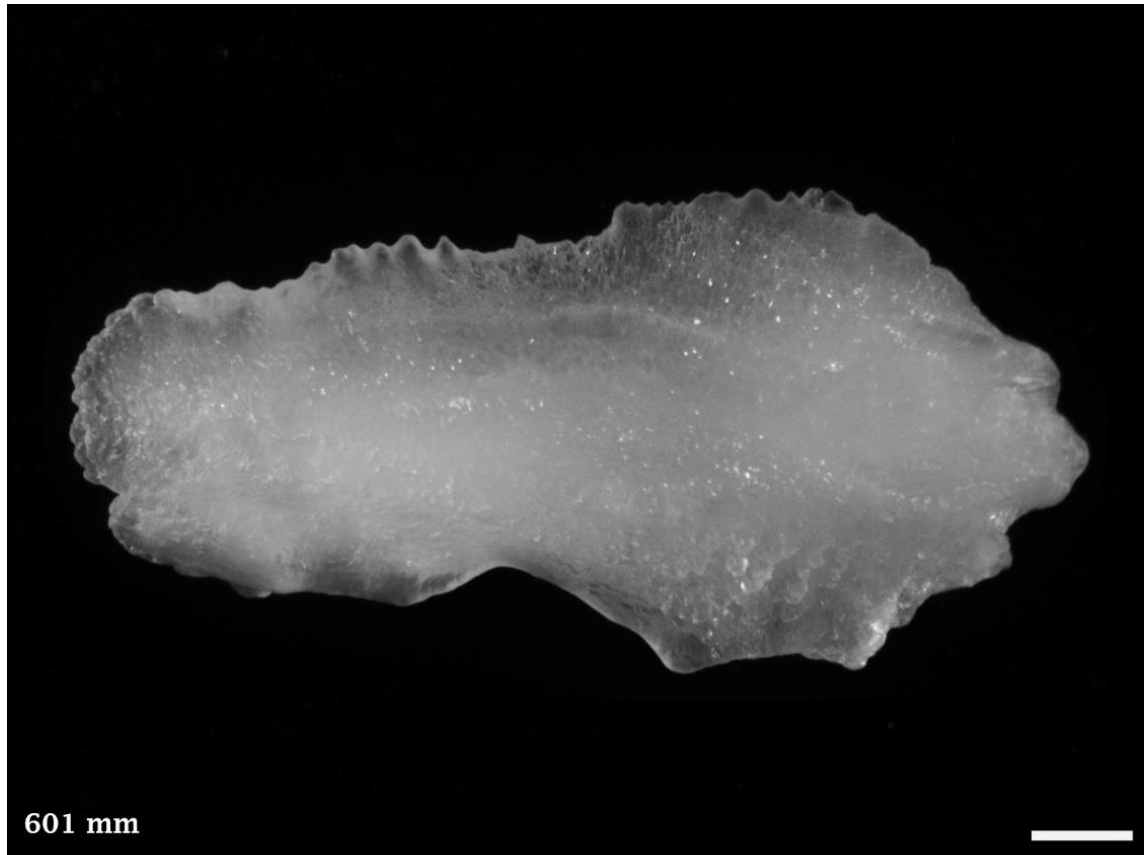


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south around to Newcastle, NSW. 500 mm TL.



5.28 *Mugil cephalus*, Sea Mullet

MUGILIFORMES MUGILIDAE (Mulletts)

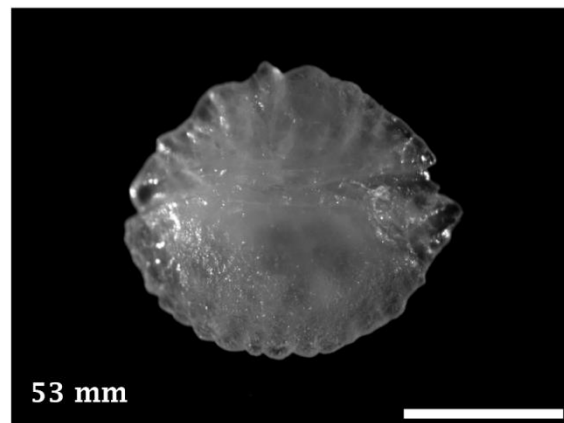
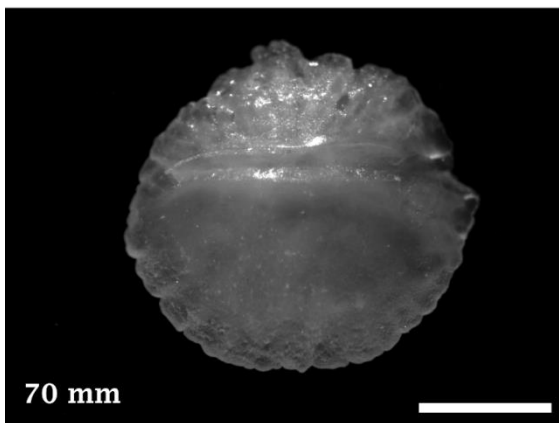
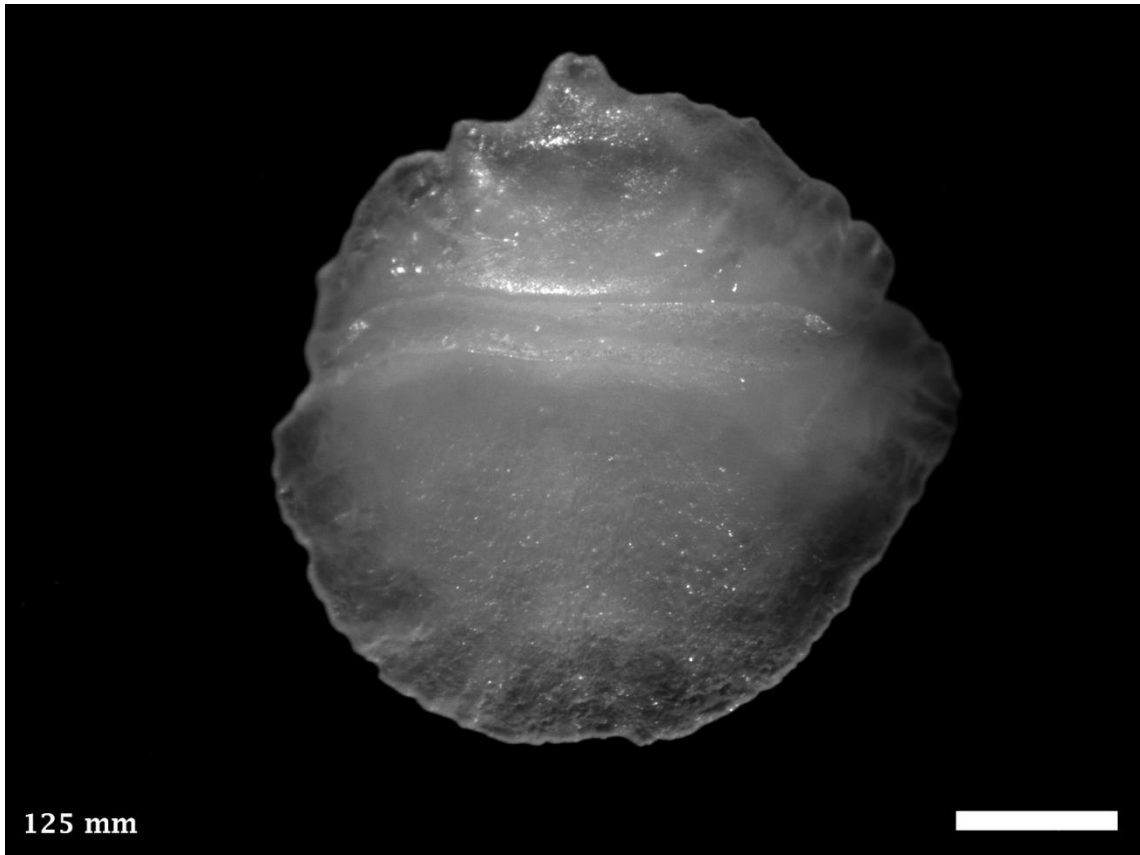


Distribution and Length: Estuarine and coastal waters circum-Australia. 800 mm SL.



5.29 *Atherinomorus vaigiensis*, Common Hardyhead

ATHERINIFORMES ATERINIDAE (Hardyheads)

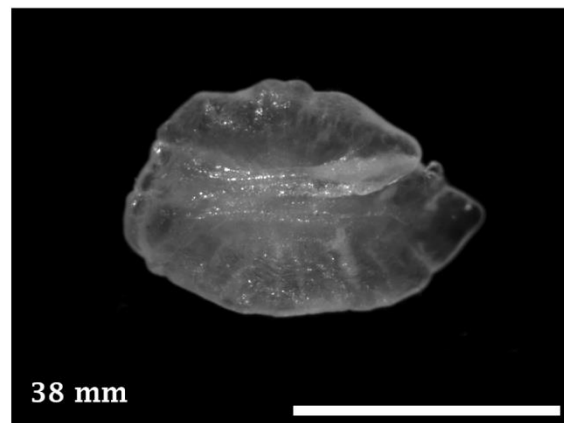
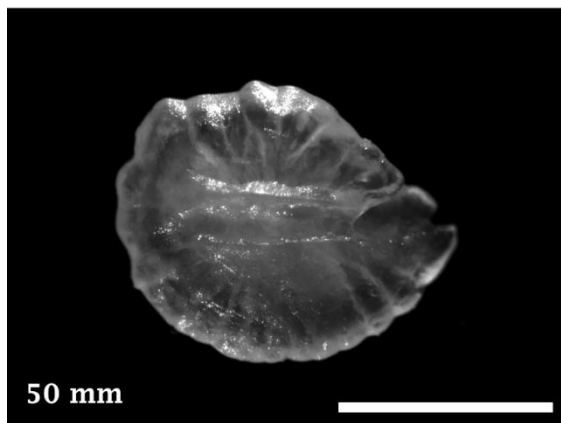
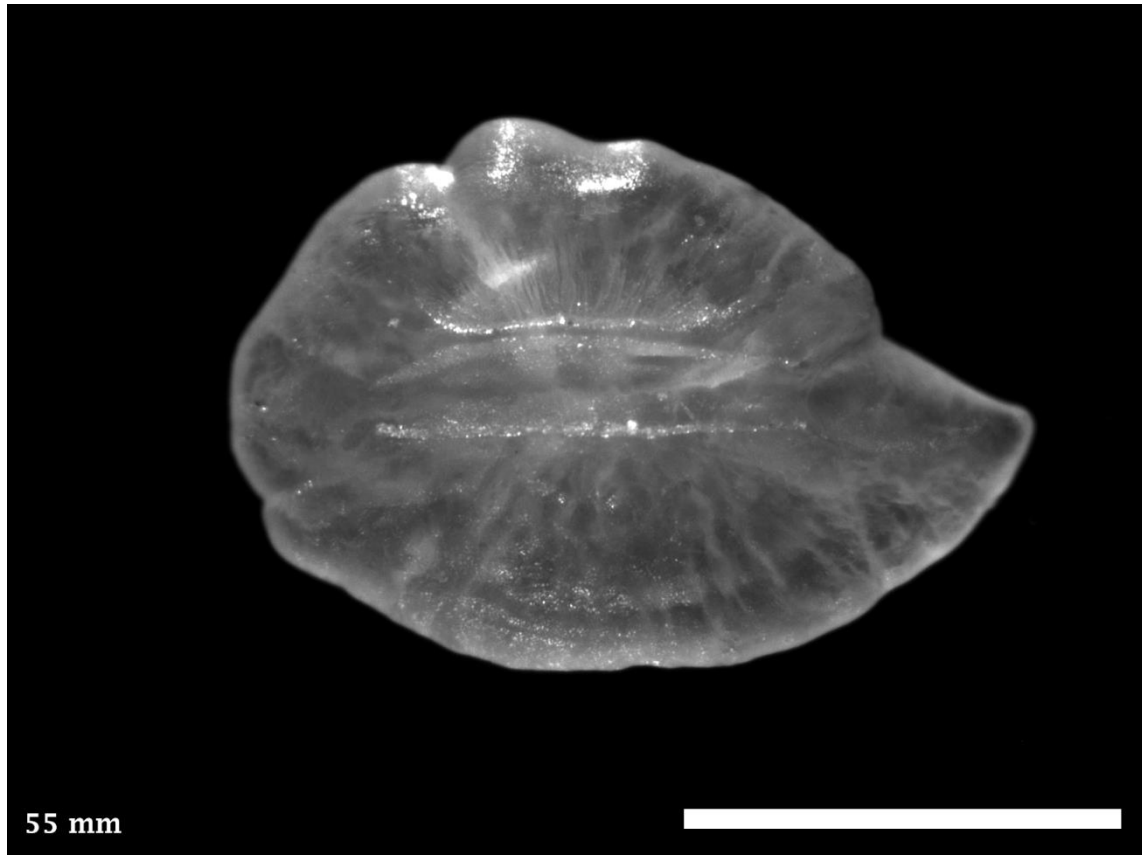


Distribution and Length: Coastal waters from North West Cape, WA south around to South Australia, and Queensland south to Merimbula, NSW. 170 mm TL.



5.30 *Atherinosoma elongata*, Elongate Hardyhead

ATHERINIFORMES ATERINIDAE (Hardyheads)

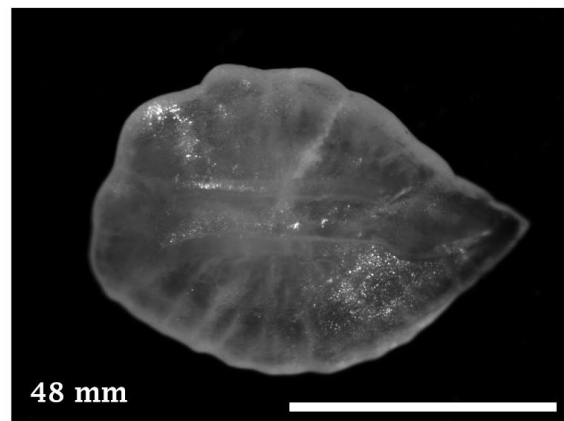
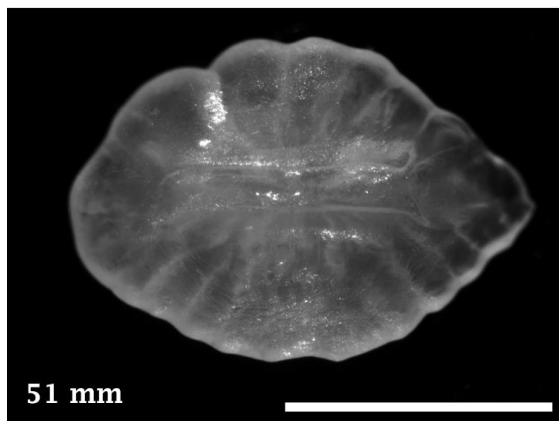
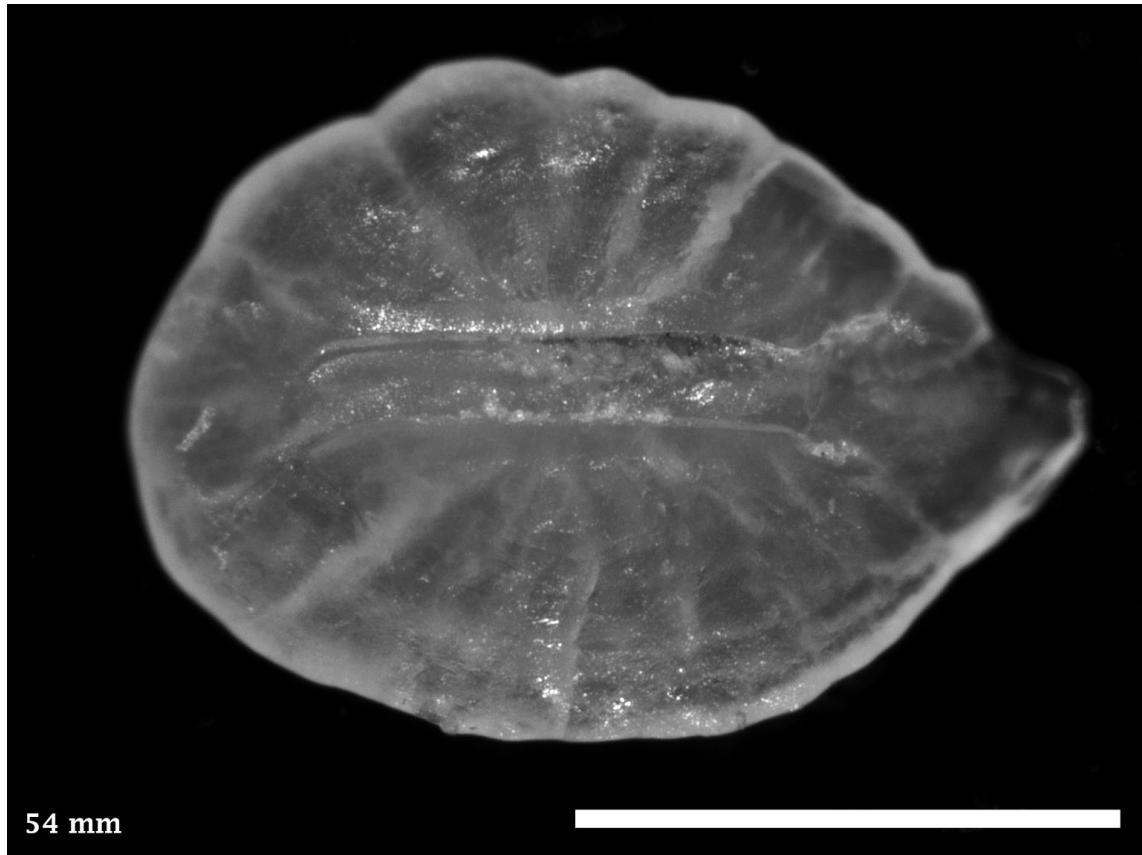


Distribution and Length: Estuarine waters from Kalbarri, WA south around to Recherche Archipelago, WA, and South Australia. 95 mm SL.



5.31 *Craterocephalus mugiloides*, Spotted Hardyhead

ATHERINIFORMES ATERINIDAE (Hardyheads)

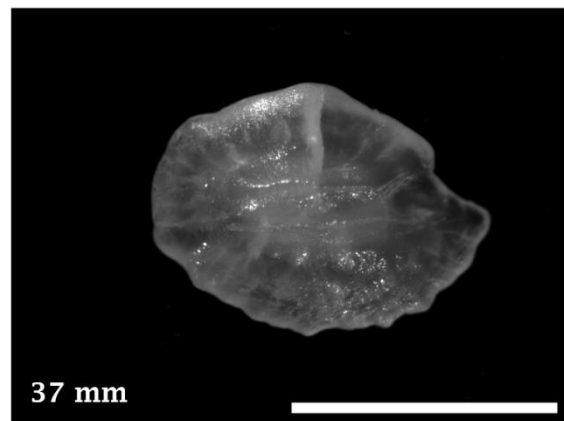
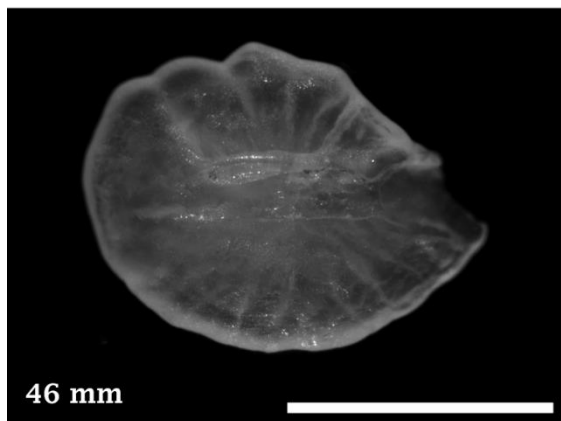
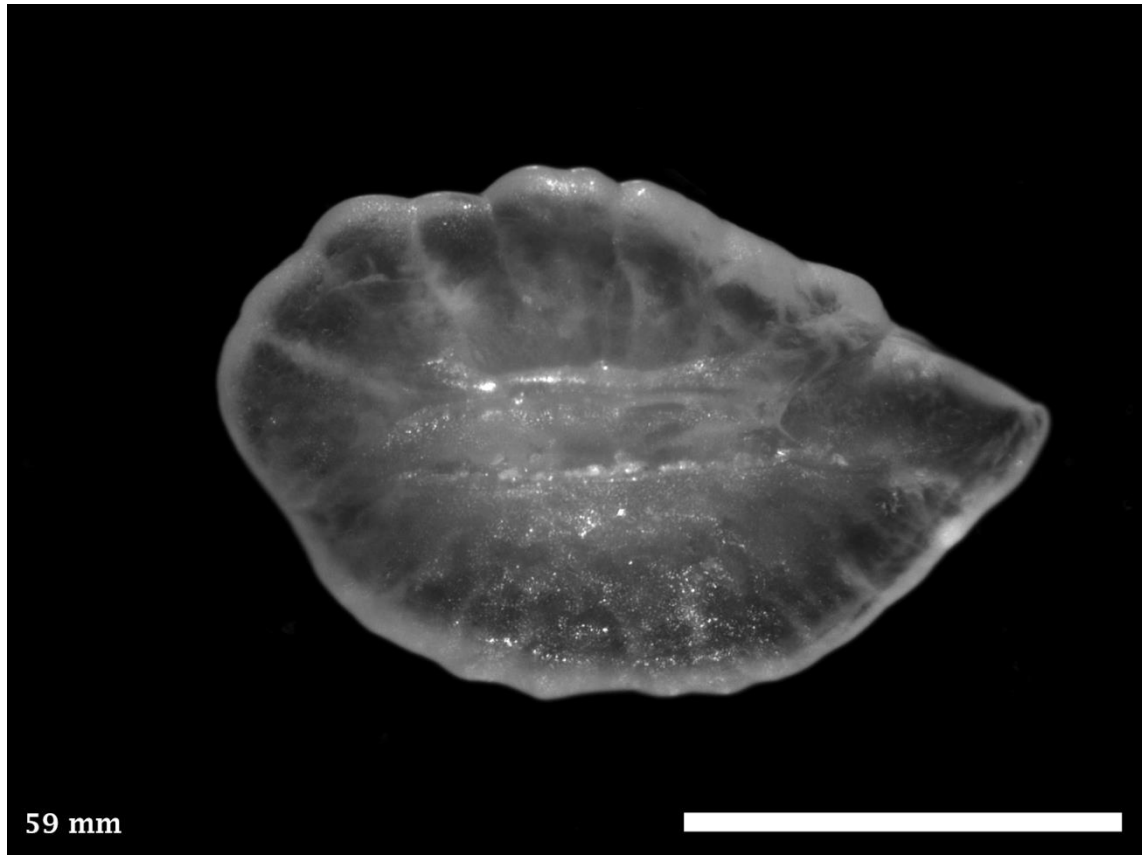


Distribution and Length: Coastal and estuarine water from Geographe Bay, WA north around to Fraser Island, Qld (Ivantsoff and Crowley 1999). 70 mm TL.



5.32 *Leptatherina wallacei*, Western Hardyhead

ATHERINIFORMES Atherinidae (Hardyheads)

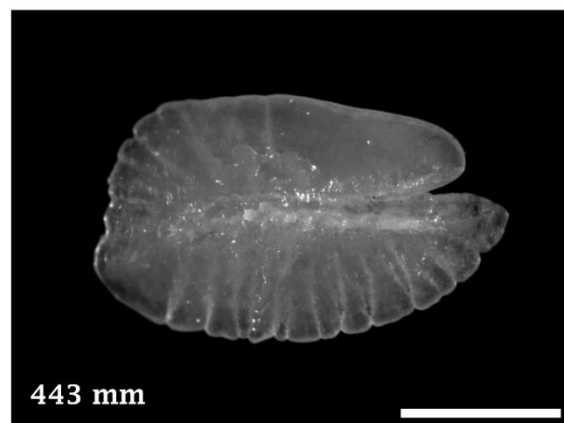
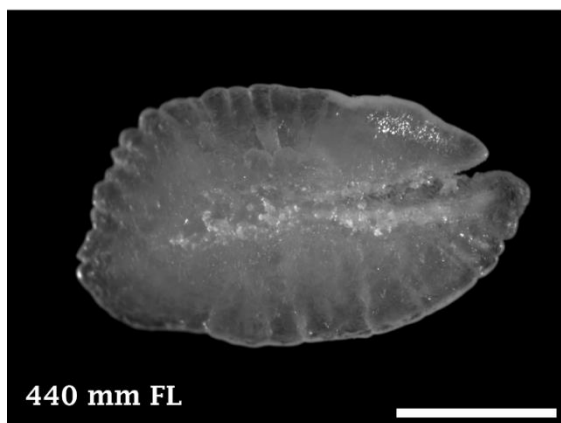
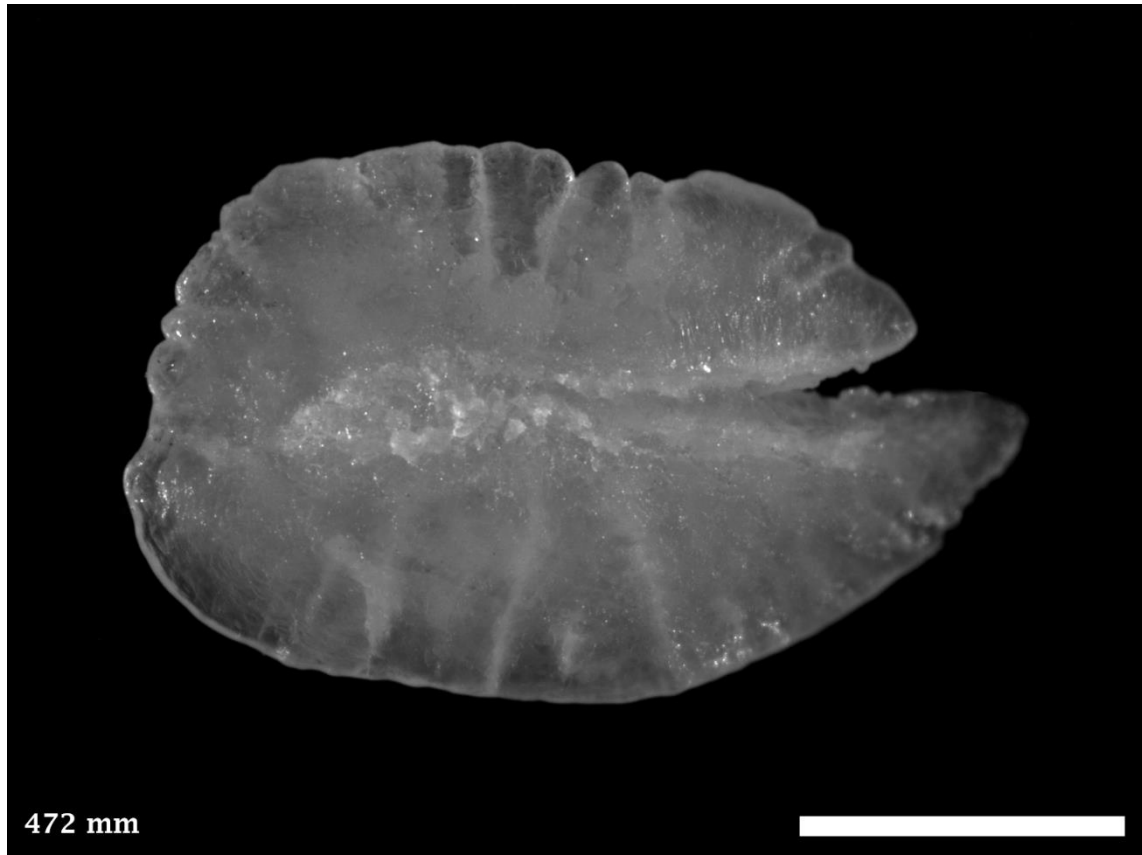


Distribution and Length: Estuarine waters from Perth, WA south around to Bremer Bay, WA. 85 mm SL.



5.33 *Ablennes hians*, Barred Longtom

BELONIFORMES BELONIDAE (Longtoms)

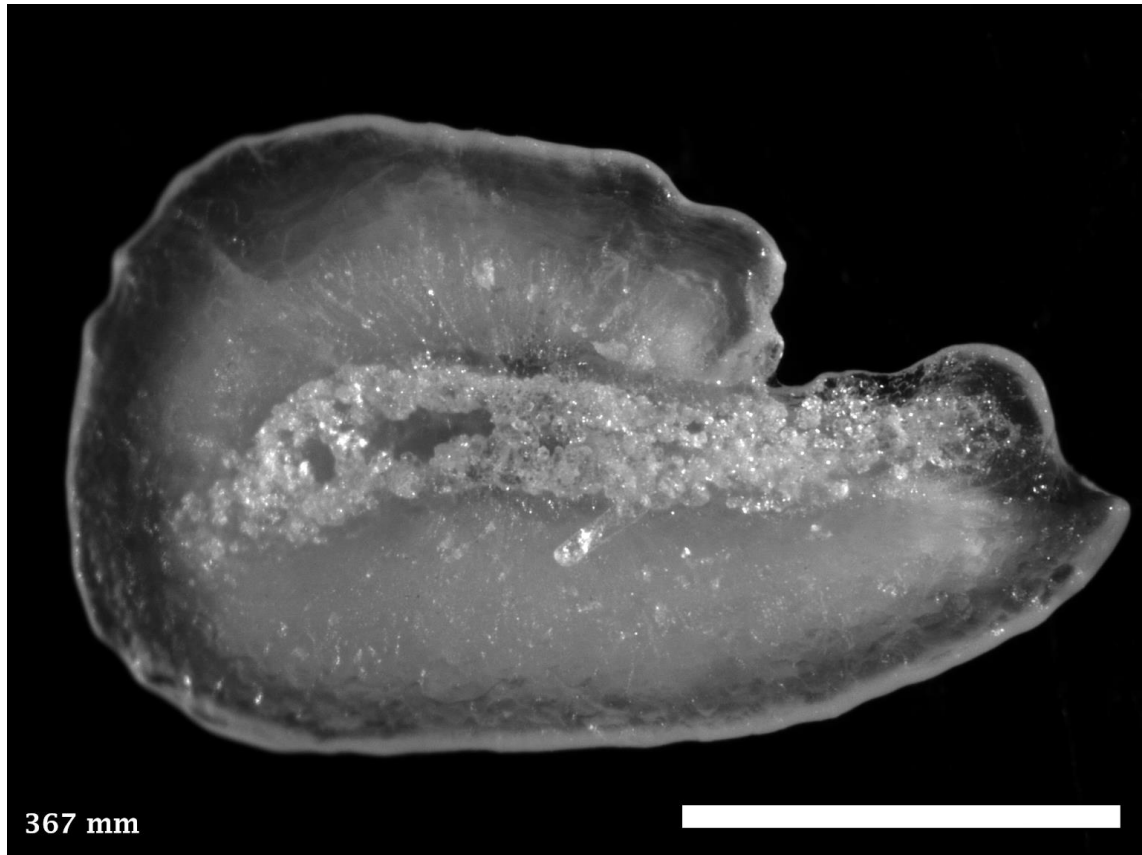


Distribution and Length: Coastal and offshore waters from Fremantle, WA north around to Wollongong, NSW. 1200 mm TL.



5.34 *Scomberesox saurus*, King Gar

BELONIFORMES SCOMBERESOCIDAE (Sauries)

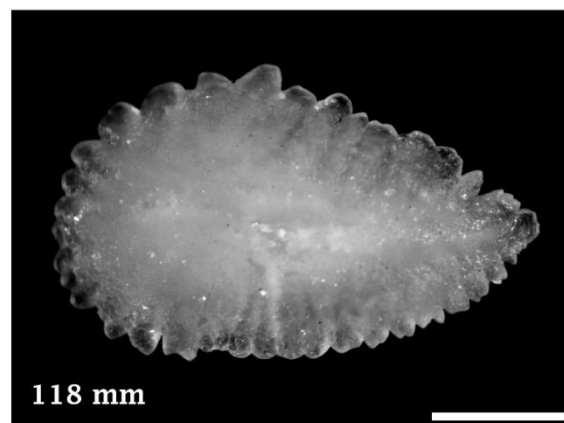
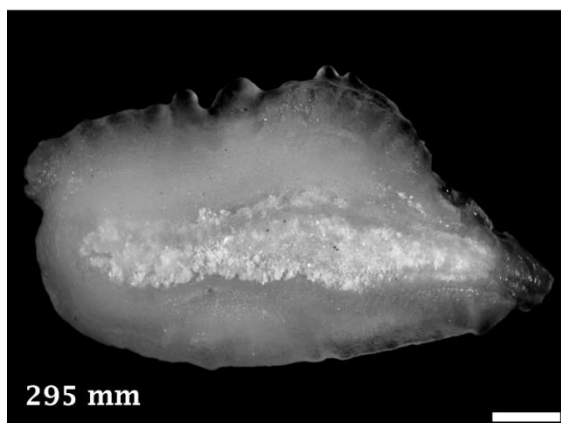
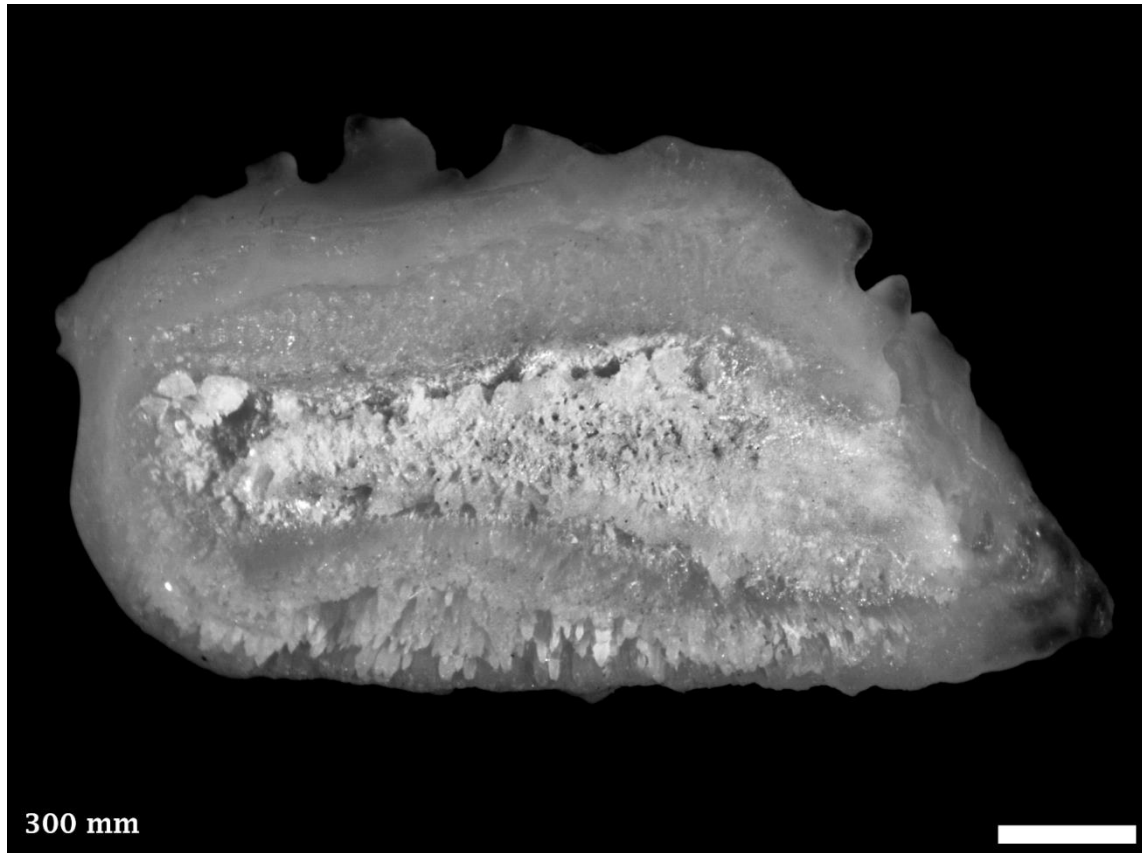


Distribution and Length: Offshore and sometimes coastal waters from Jurien Bay, WA south around to NSW. 450 mm SL.

No image.

5.35 *Cheilopogon* spp., Flyingfish

BELONIFORMES EXOCOETIDAE (Flyingfishes)

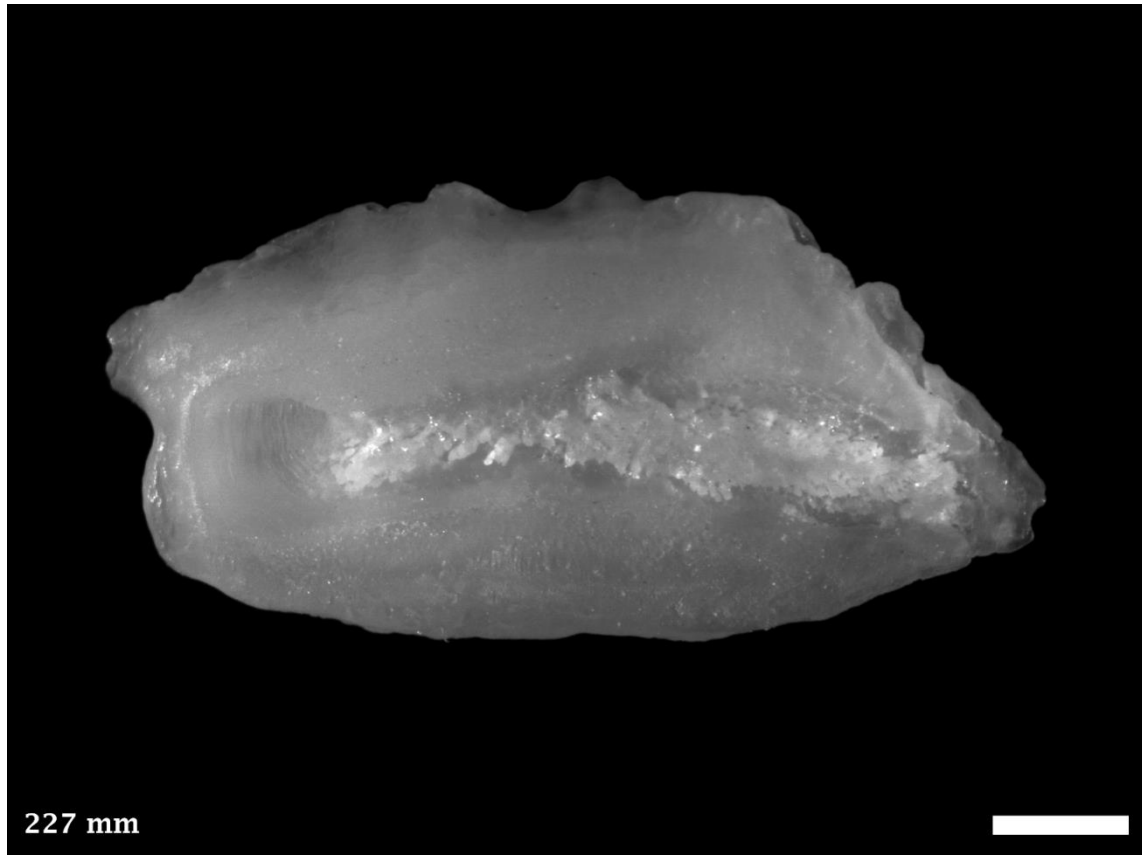


Distribution and Length: Surface waters circum-Australia. 300 mm SL.



5.36 *Hirundichthys* spp., Flyingfish

BELONIFORMES EXOCOETIDAE (Flyingfishes)

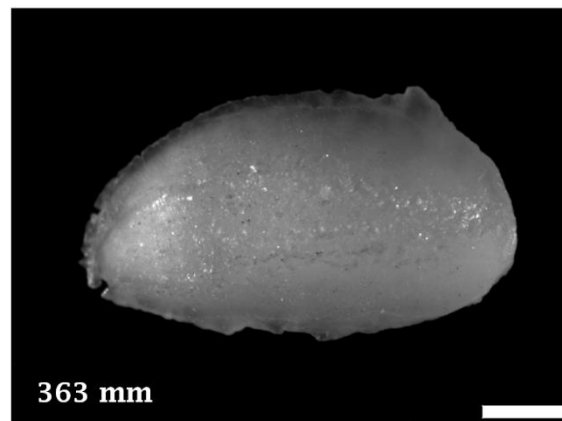
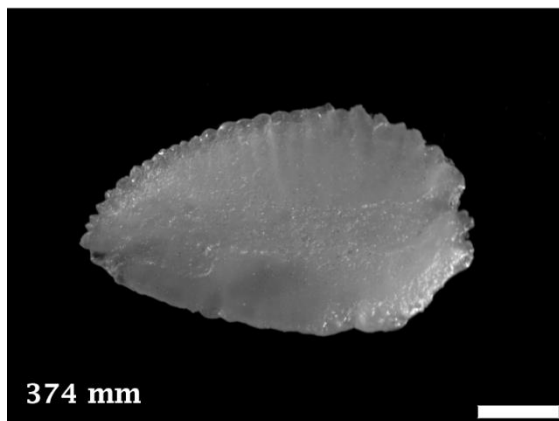
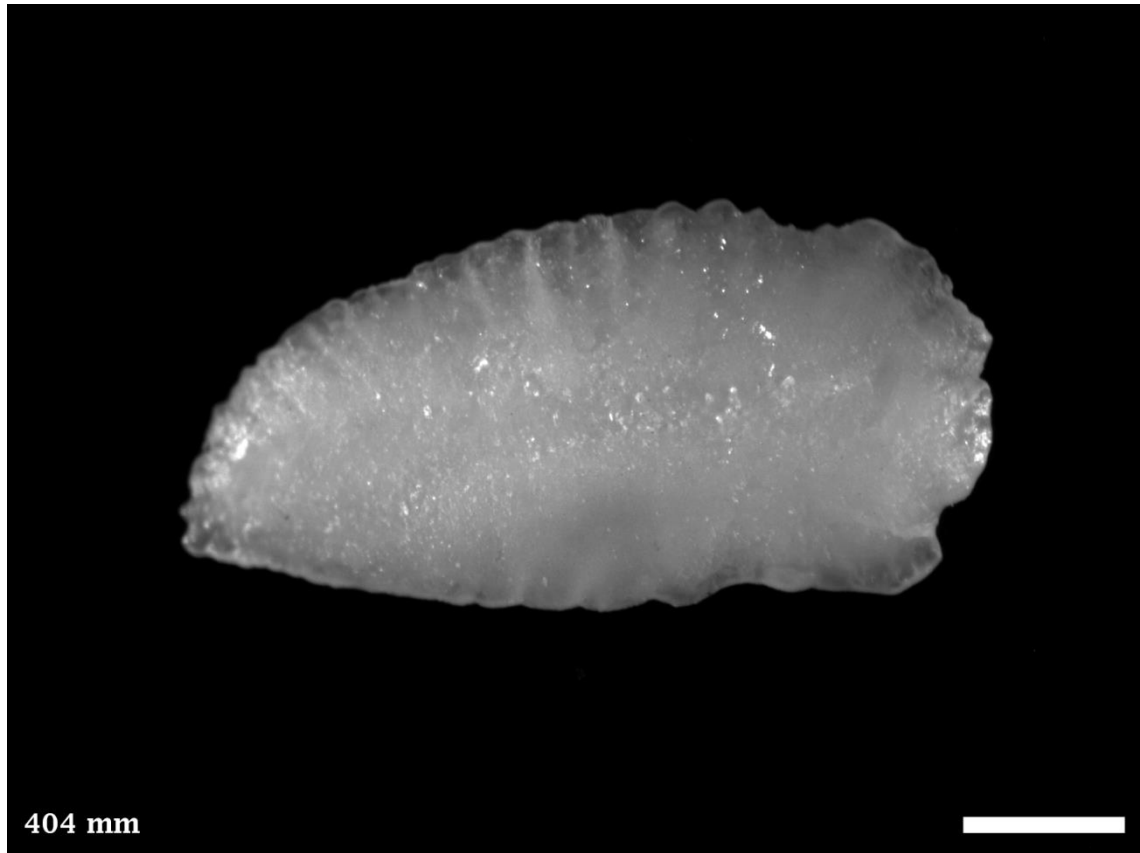


Distribution and Length: Surface waters circum-Australia. 300 mm SL.



5.37 *Euleptorhamphus viridis*, Longfin Garfish

BELONIFORMES HEMIRAMPHIDAE (Garfishes)

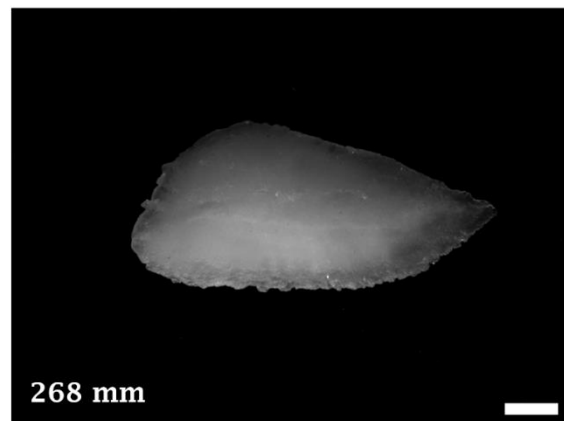
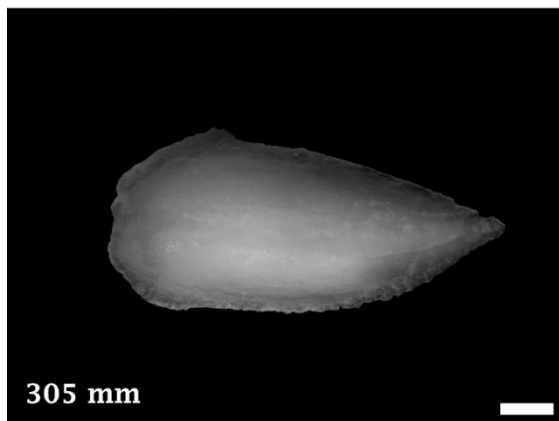
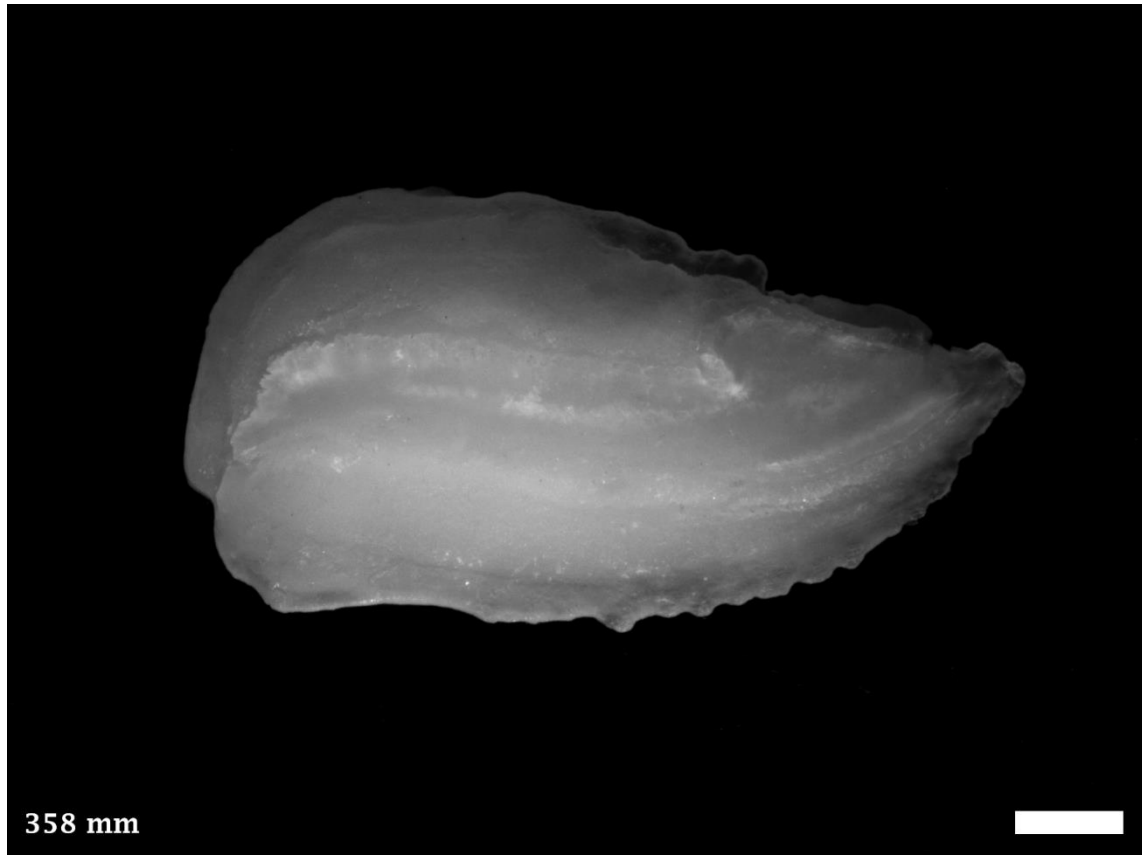


Distribution and Length: Offshore and sometimes coastal waters from Albany, WA north to Batemans Bay, NSW. Note: right otoliths. 600 mm TL.



5.38 *Hemiramphus robustus*, Three-by-two Garfish

BELONIFORMES HEMIRAMPHIDAE (Garfishes)

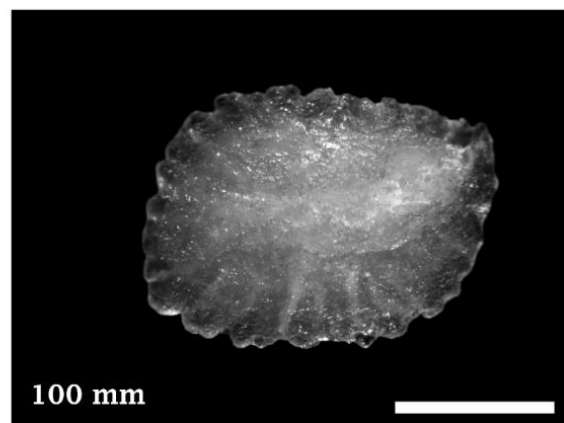
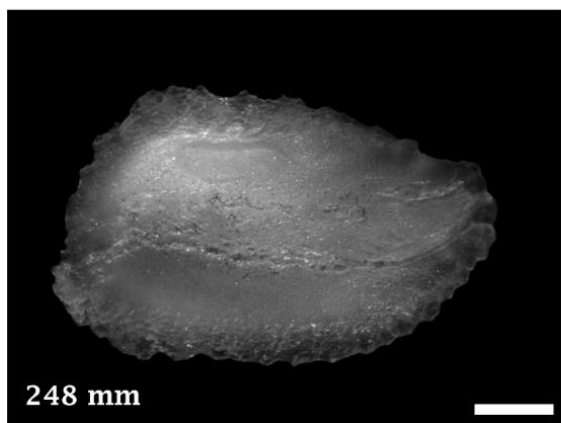
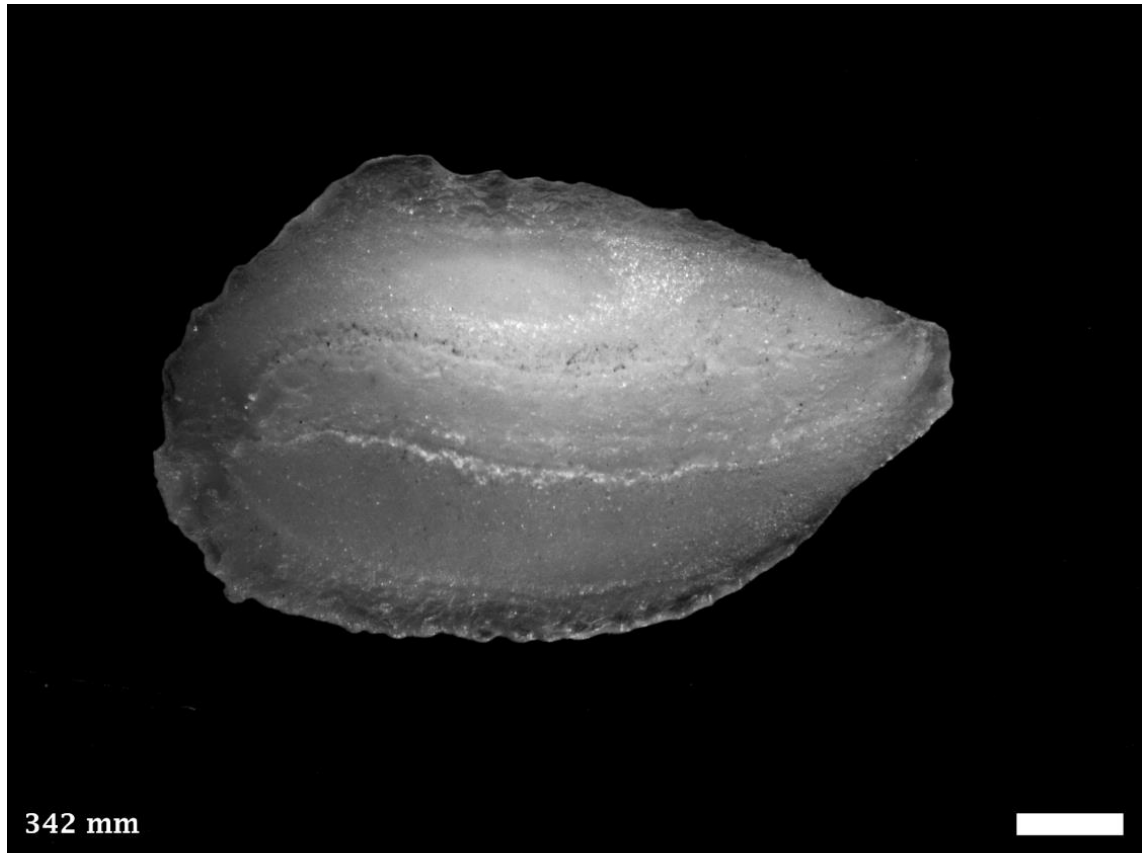


Distribution and Length: Coastal waters from Geographe Bay, WA north to Sydney, NSW. 480 mm TL.



5.39 *Hyporhamphus melanochir*, Southern Garfish

BELONIFORMES HEMIRAMPHIDAE (Garfishes)

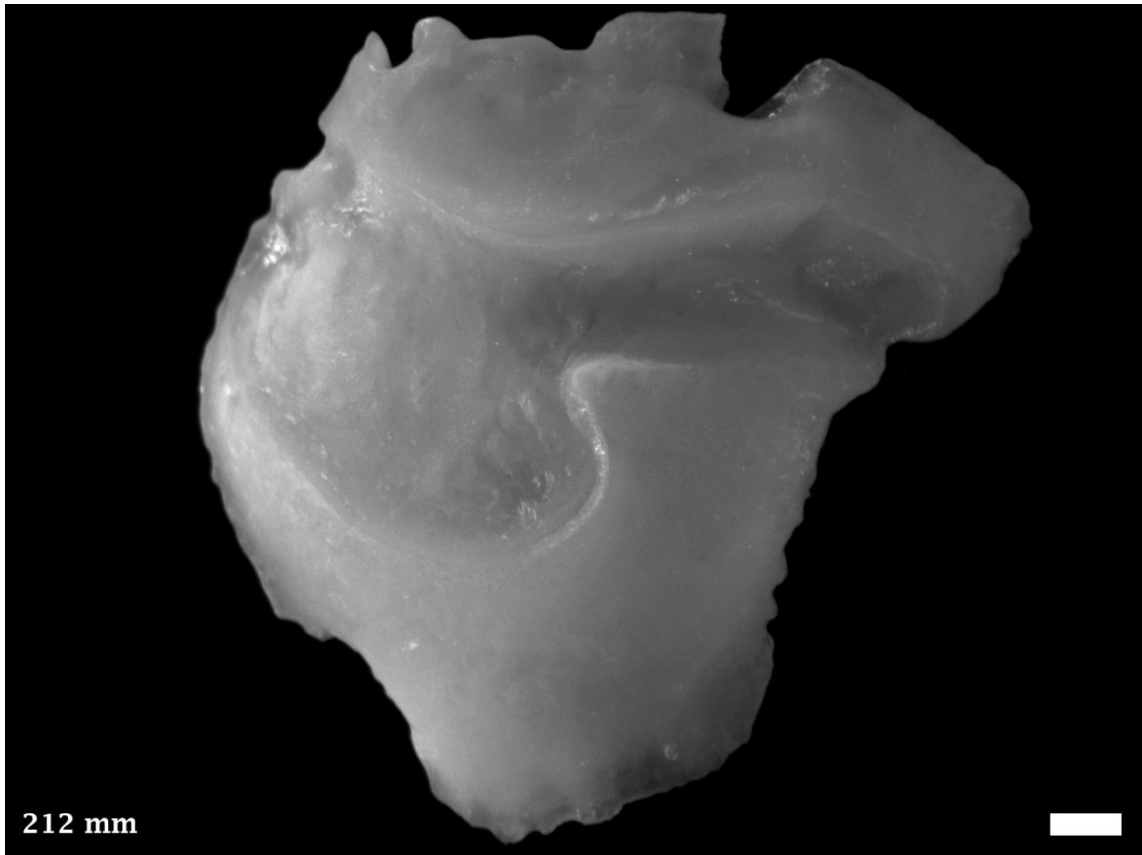


Distribution and Length: Coastal waters from Lancelin, WA South to eastern Victoria, including Tasmania. 520 mm TL.



5.40 *Cleidopus gloriamaris*, Australian Pineapplefish

BERYCIFORMES MONOCENTRIDAE (Pineapplefishes)

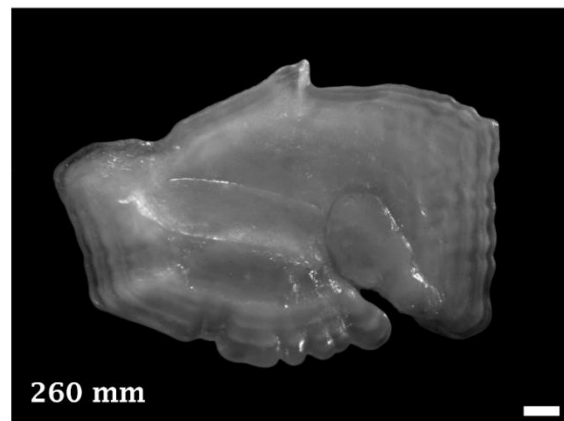
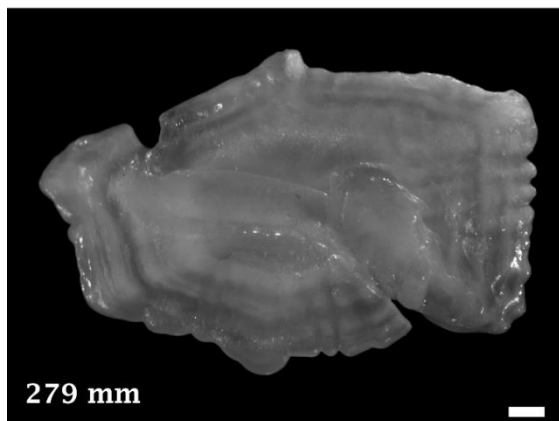
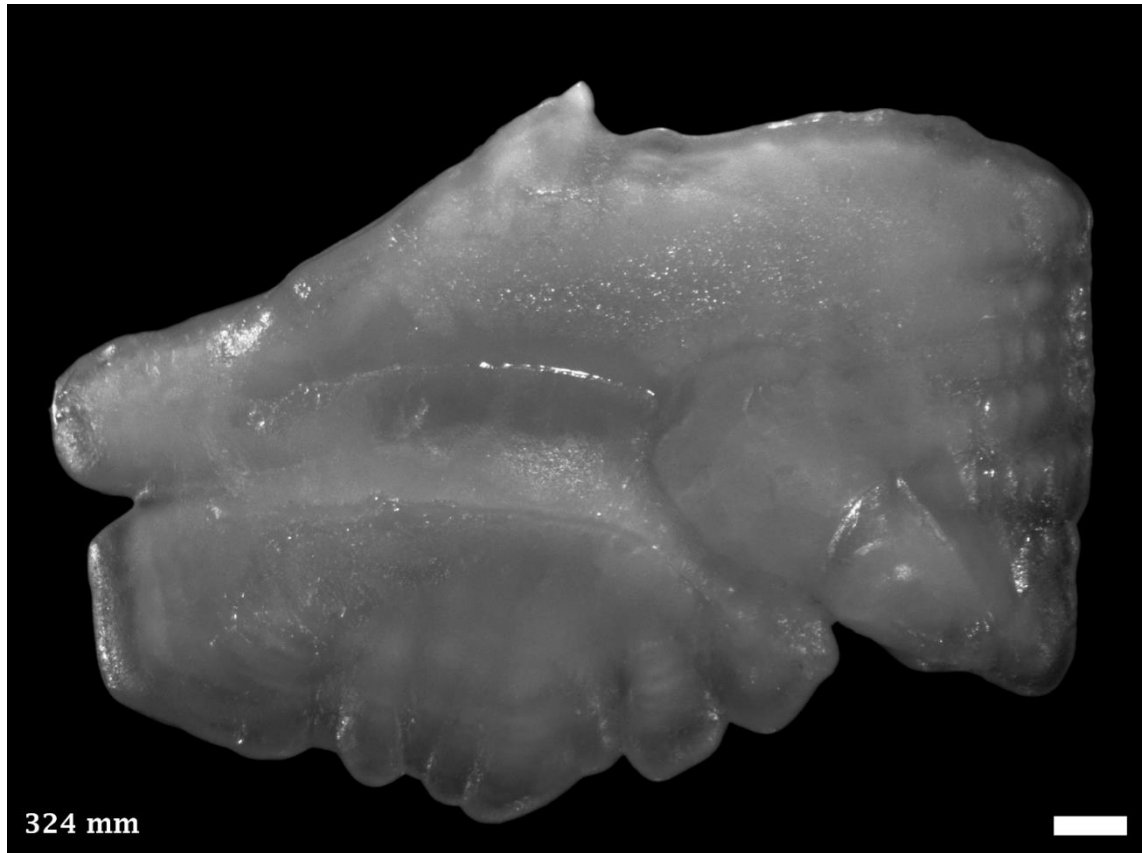


Distribution and Length: Estuarine, coastal and offshore waters from Shark Bay, WA south around to Great Australian Bight and Capricorn Group, Qld. south to Eden, NSW. Note: Right otoliths. 280 mm SL.



5.41 *Gephyroberyx darwinii*, Darwin's Roughy

BERYCIFORMES TRACHICHTHYIDAE (Roughies)

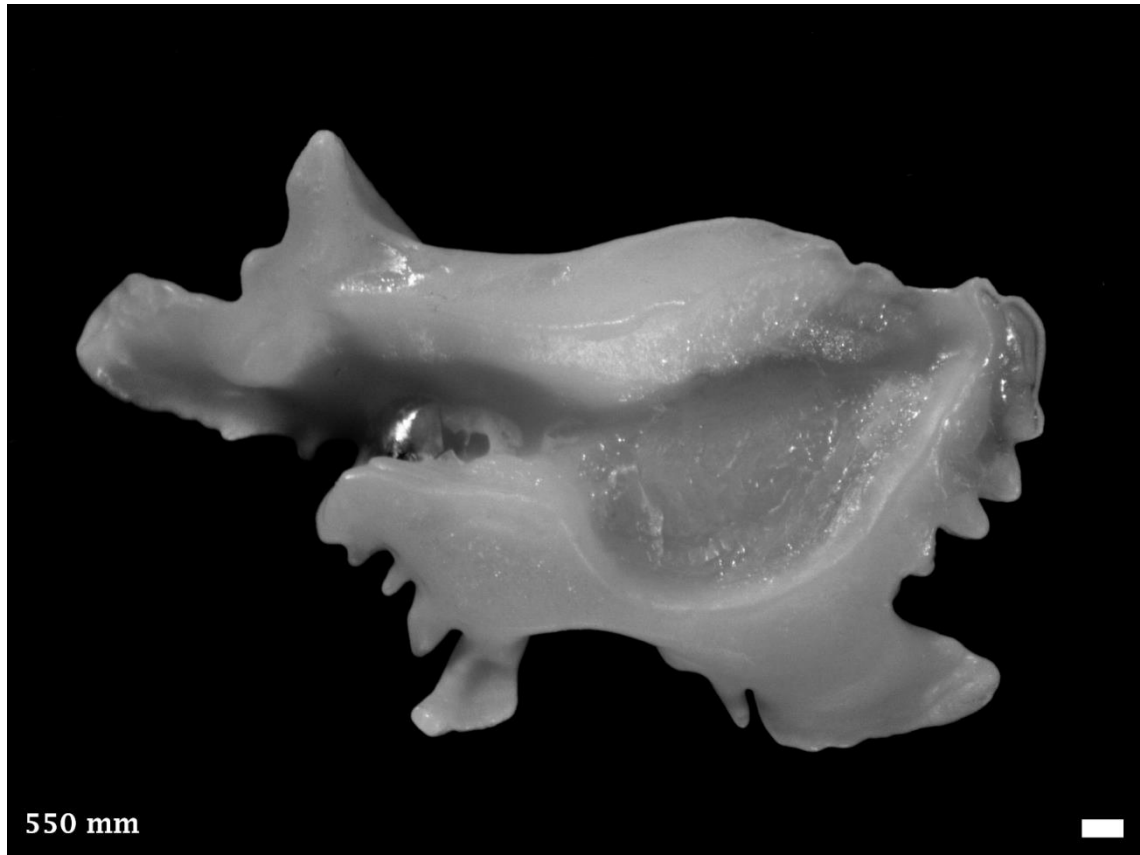


Distribution and Length: Deep offshore waters from Port Headland, WA South around to northern New South Wales, including Tasmania. Note: Right otoliths. 300 mm SL.



5.42 *Hoplostethus gigas*, Giant Sawbelly

BERYCIFORMES TRACHICHTHYIDAE (Roughies)

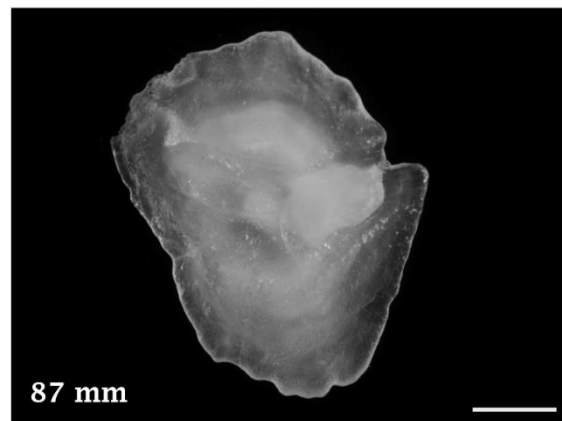
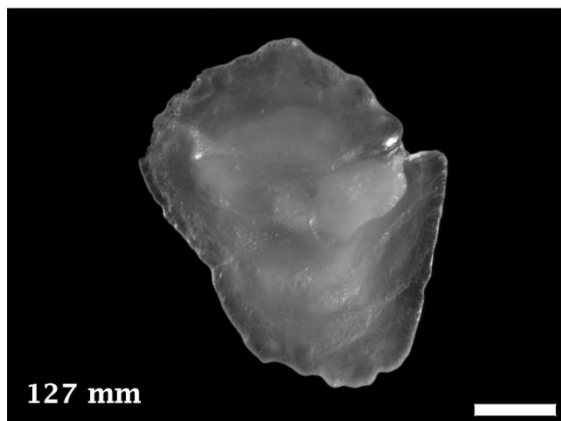
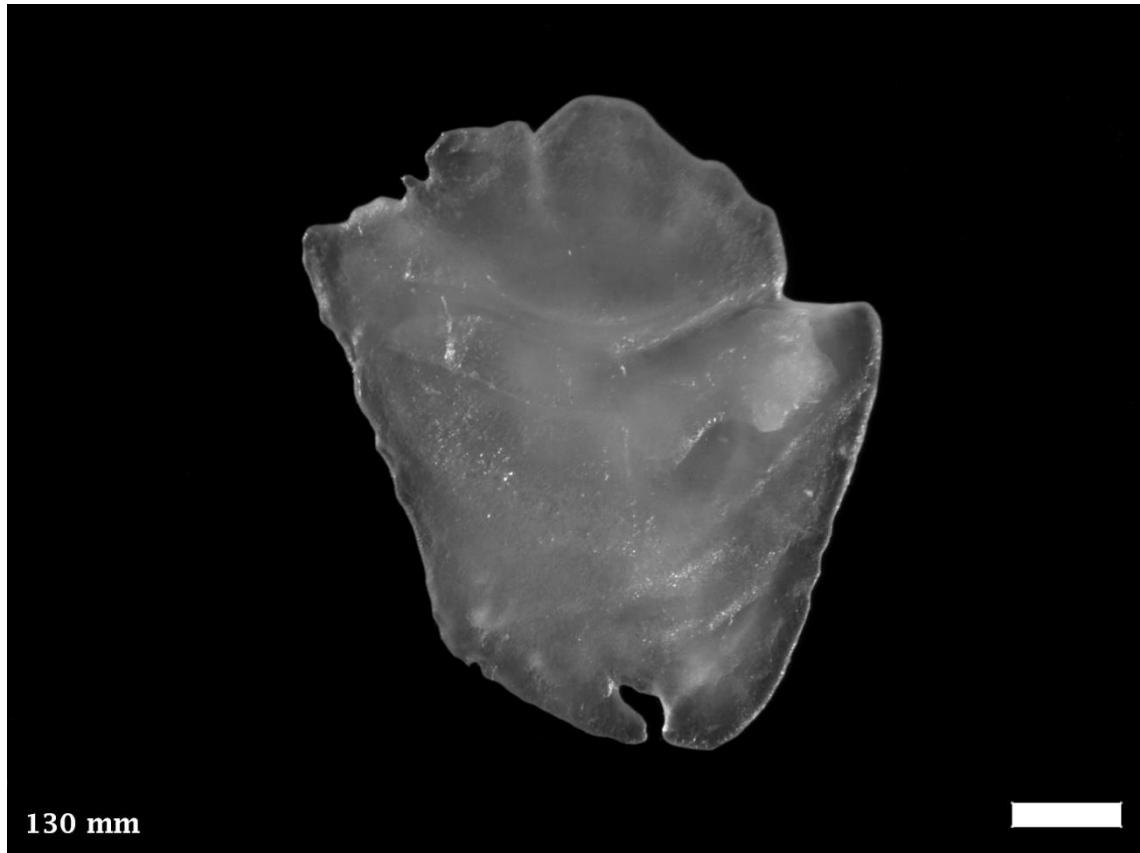


Distribution and Length: Deep rocky offshore waters from Windy Harbour, WA across to western Victoria. 520 mm SL.



5.43 *Trachichthys australis*, Southern Roughy

BERYCIFORMES TRACHICHTHYIDAE (Roughies)

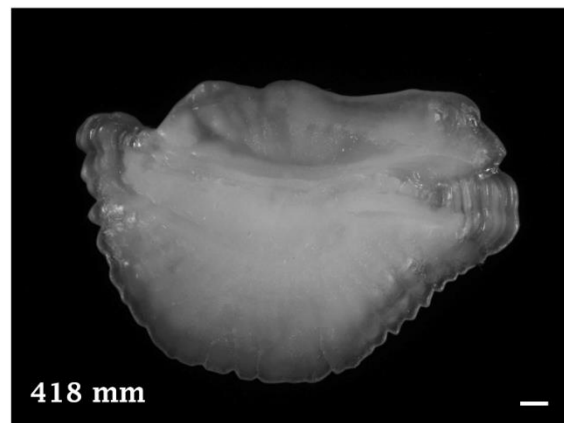
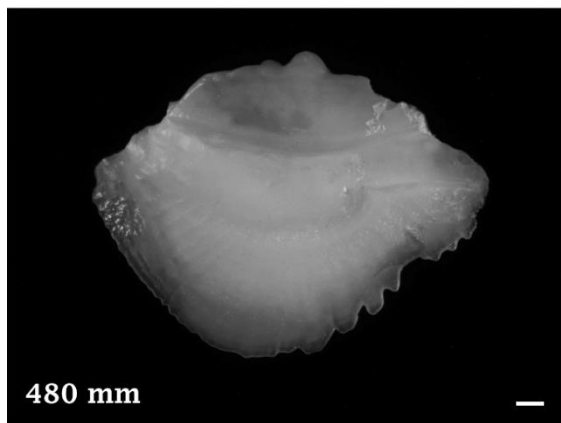
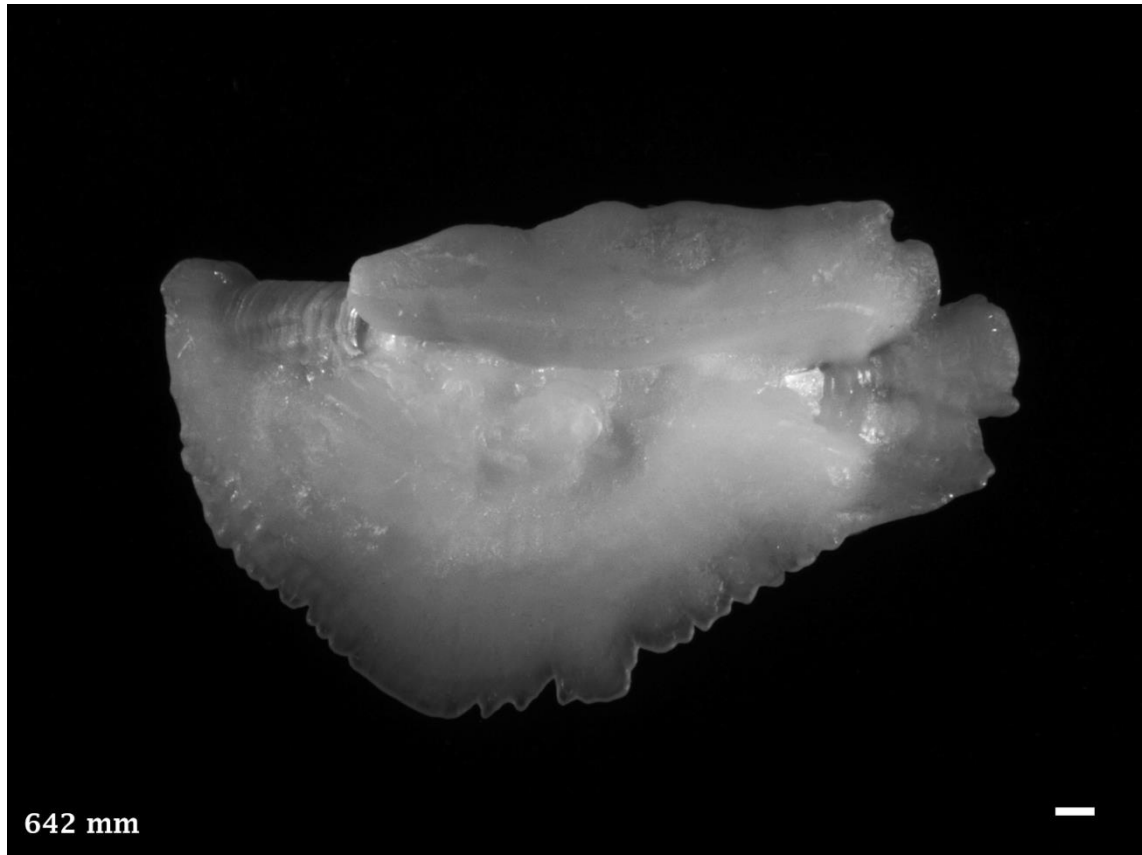


Distribution and Length: Coastal waters from Kalbarri, WA south around to Coffs Harbour, NSW. 180 mm SL.



5.44 *Beryx decadactylus*, Imperador

BERYCIFORMES BERYCIDAE (Alfonsinos)

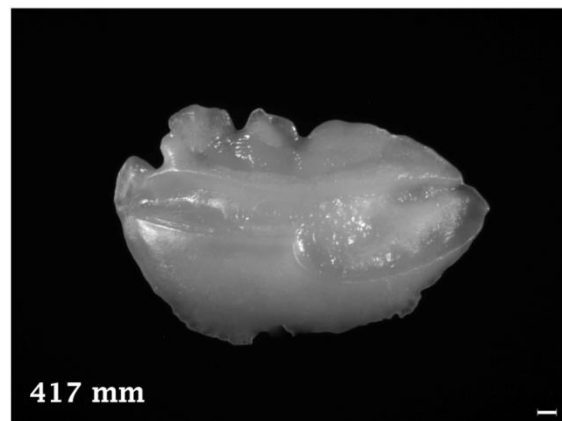
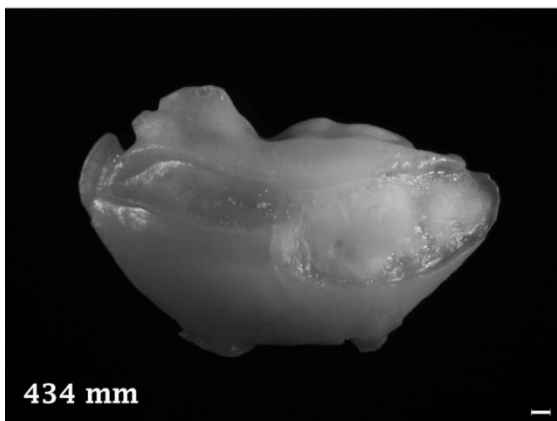
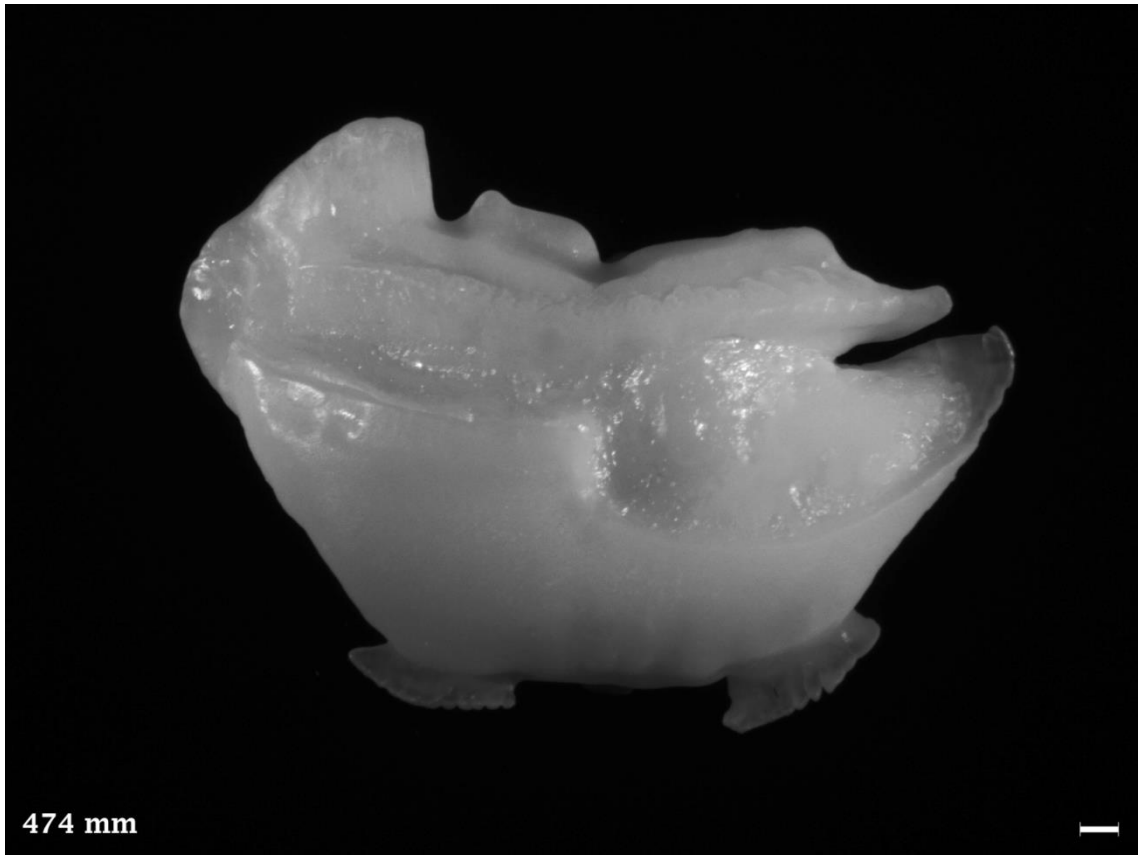


Distribution and Length: Deep offshore waters to 1000m from Jurien Bay, WA south around to southern Queensland, including Tasmania. 450 mm SL.



5.45 *Centroberyx affinis*, Redfish

BERYCIFORMES BERYCIDAE (Alfonsinos)

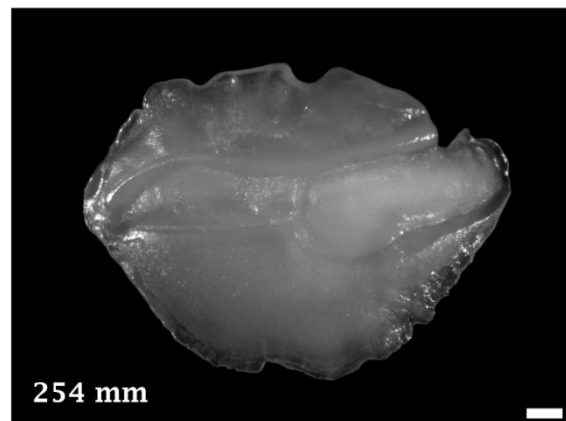
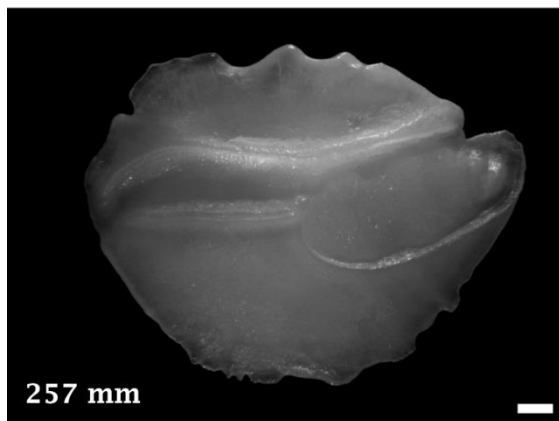
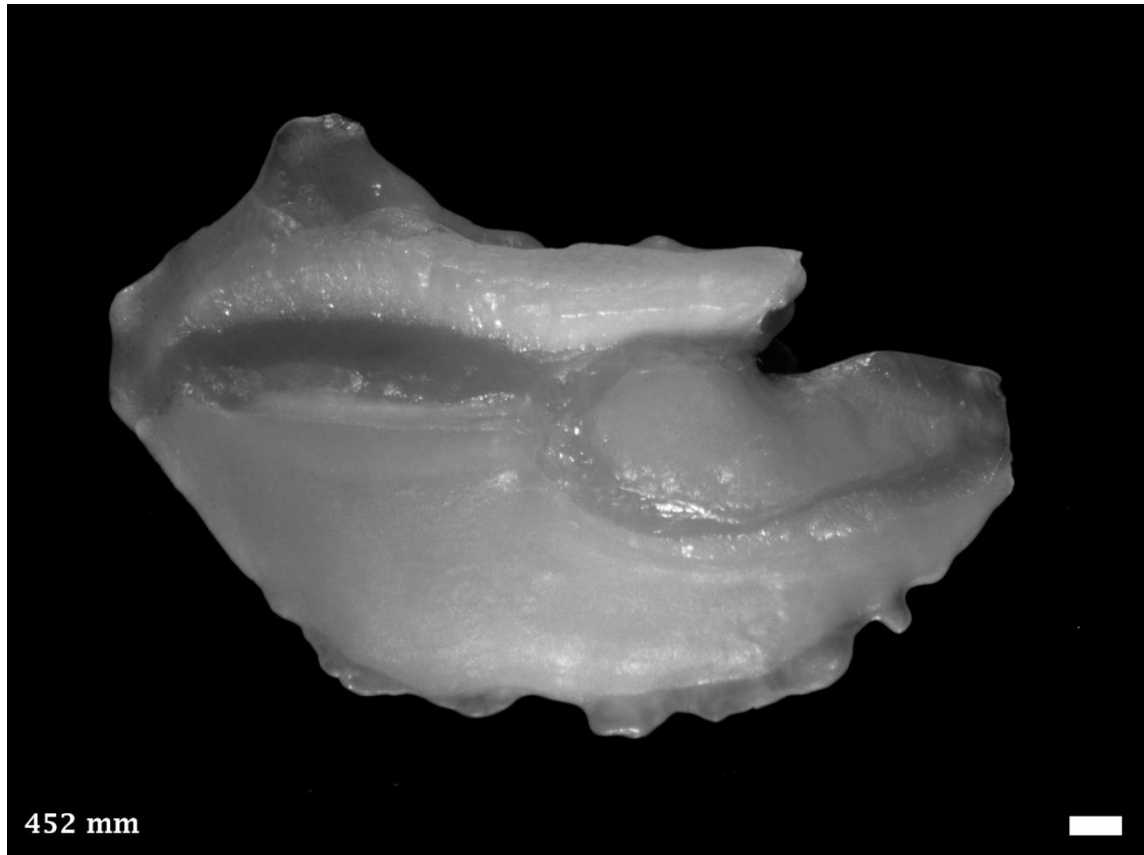


Distribution and Length: Offshore waters Albany, WA east around to southern Queensland, including Tasmania. 510 mm TL.



5.46 *Centroberyx australis*, Yelloweye Redfish

BERYCIFORMES BERYCIDAE (Alfonsinos)

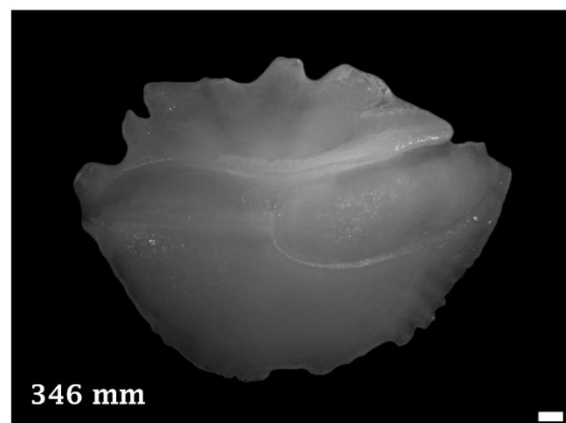
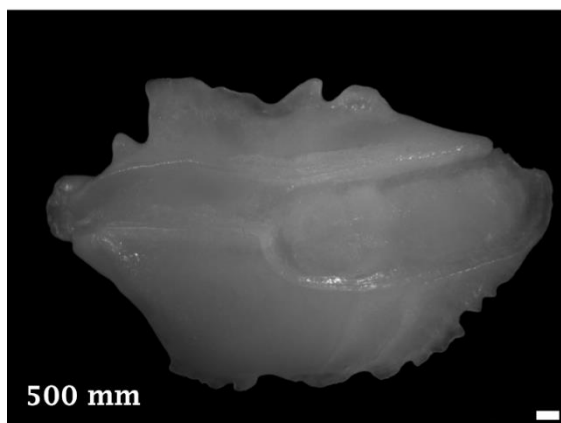
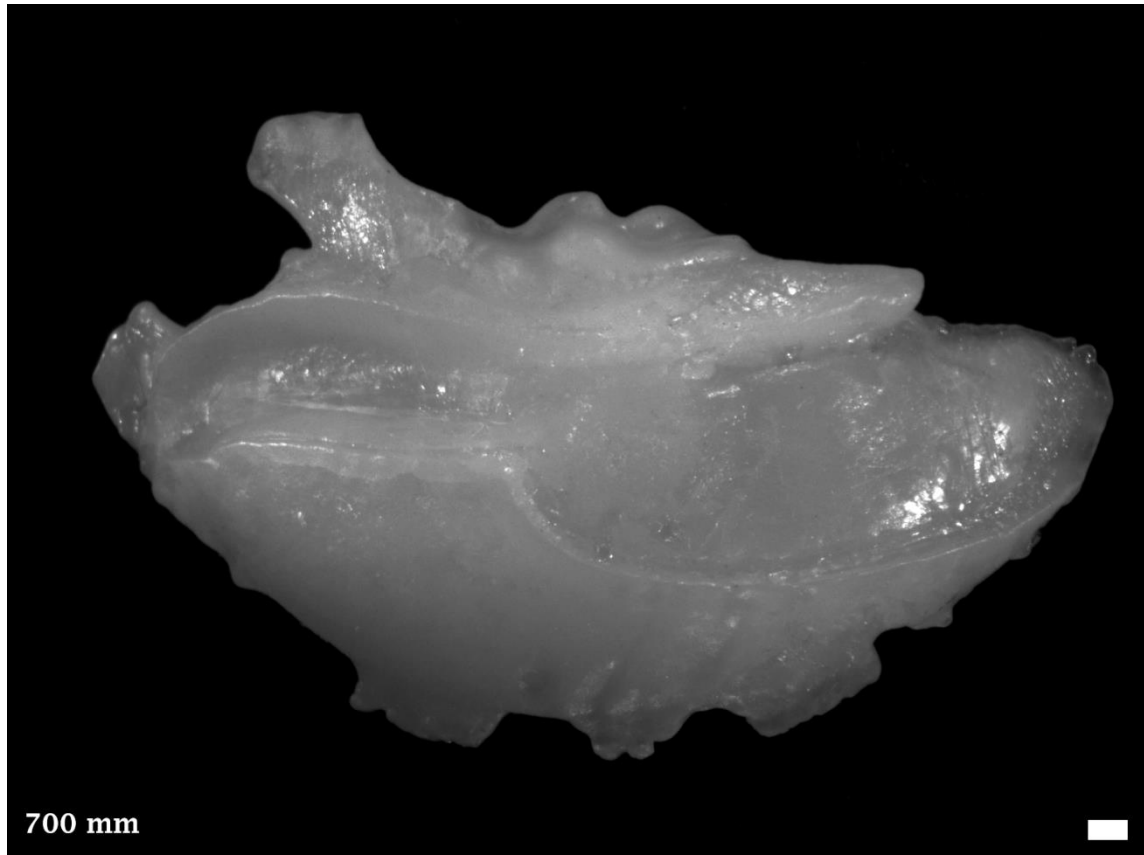


Distribution and Length: Deep offshore waters from Exmouth Gulf, WA south around to South Australia. 450 mm TL.



5.47 *Centroberyx gerrardi*, Bight Redfish

BERYCIFORMES BERYCIDAE (Alfonsinos)

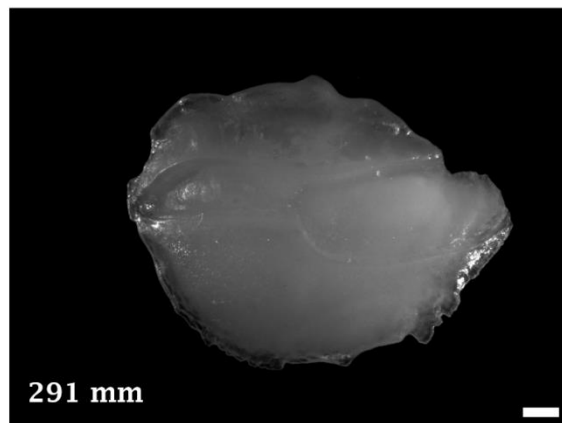
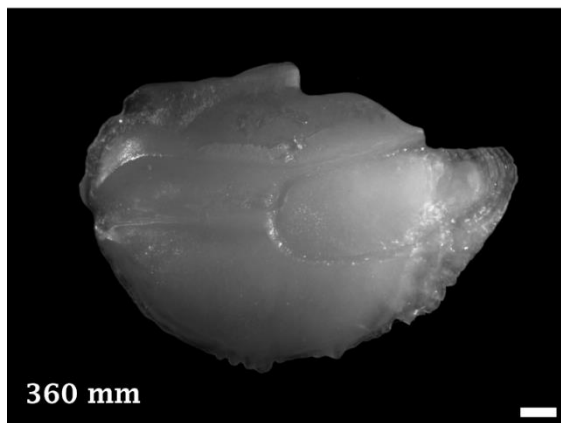
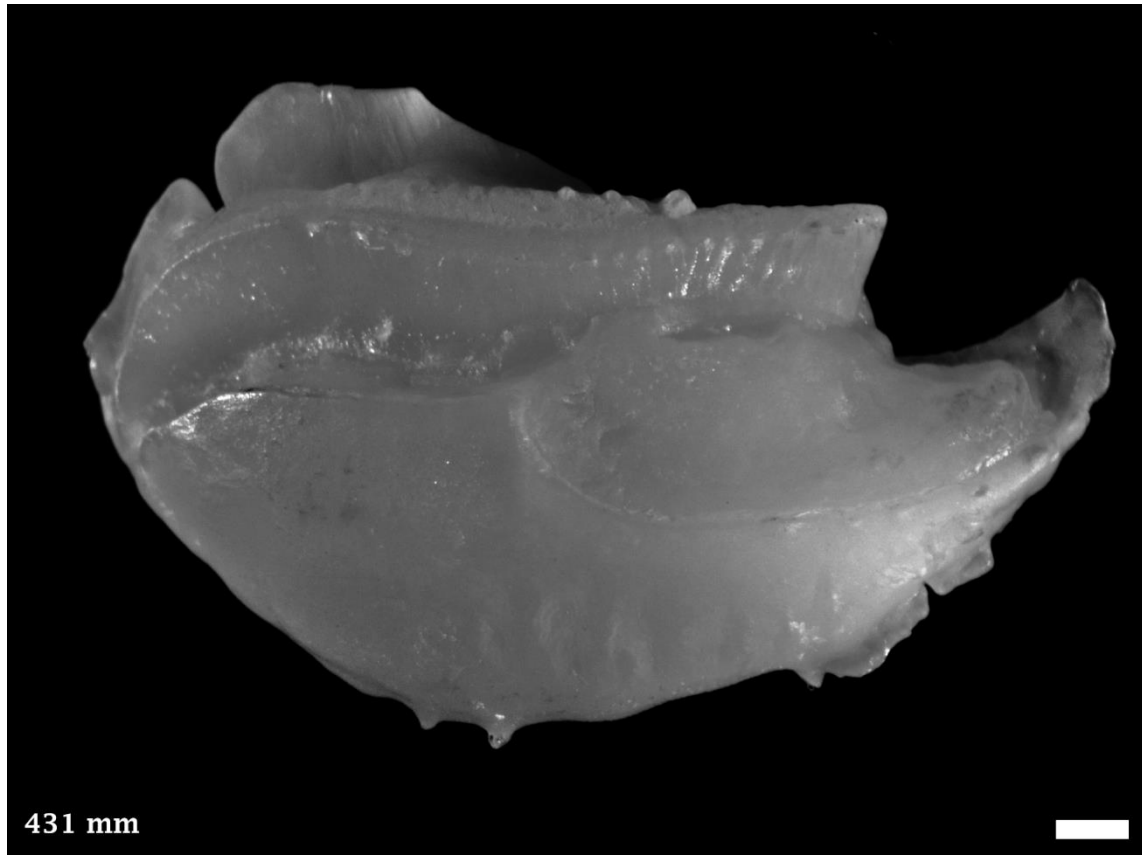


Distribution and Length: Deep offshore waters from Lancelin, WA south around to southern NSW, including Tasmania. 700 mm TL.



5.48 *Centroberyx lineatus*, Swallowtail

BERYCIFORMES BERYCIDAE (Alfonsinos)

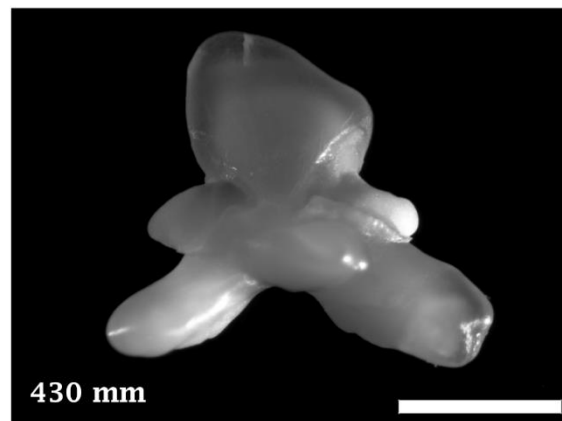
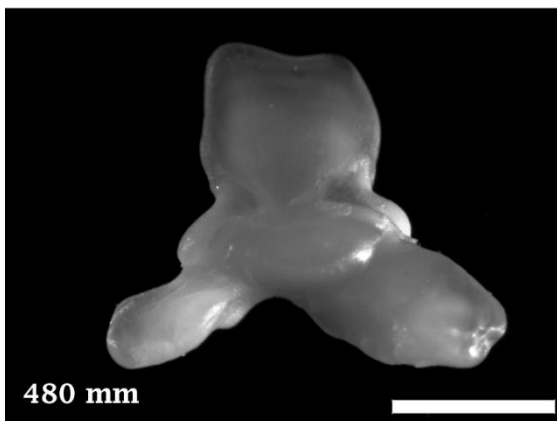
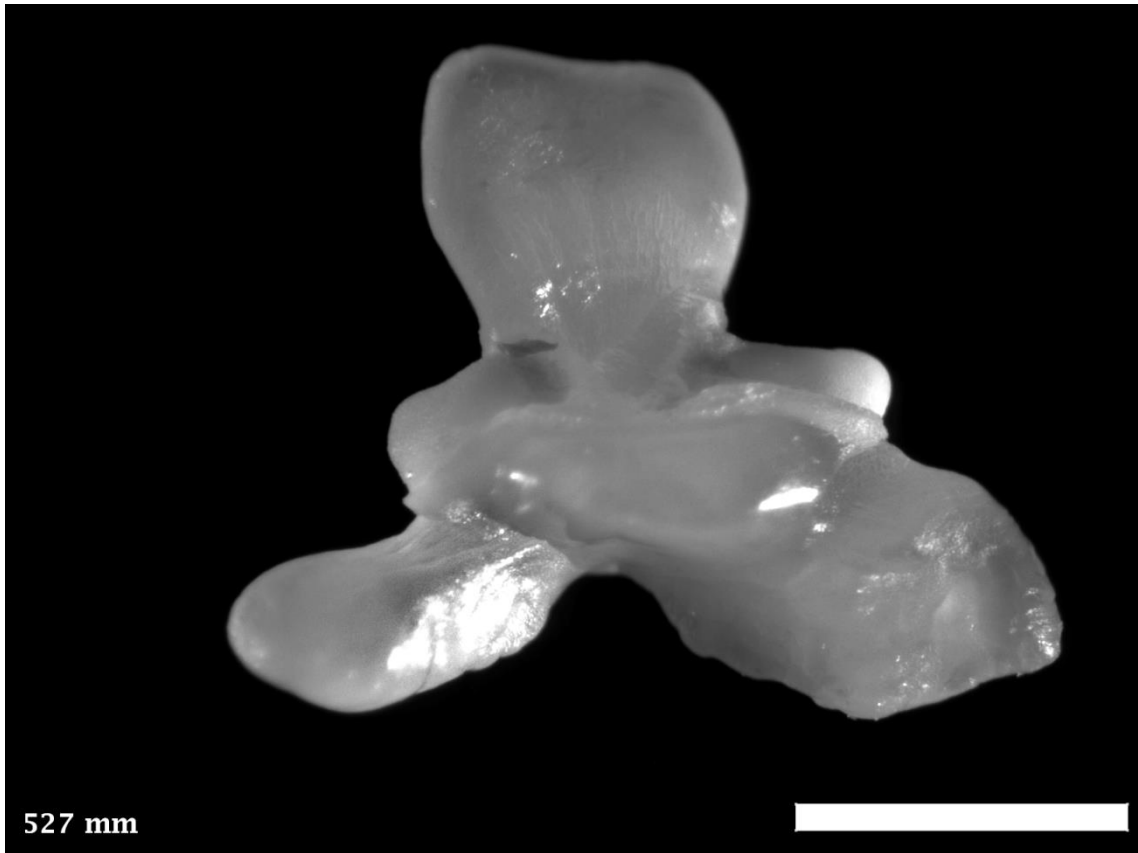


Distribution and Length: Coastal and offshore waters from Lancelin, WA south around to southern NSW, including Tasmania. 360 mm SL.

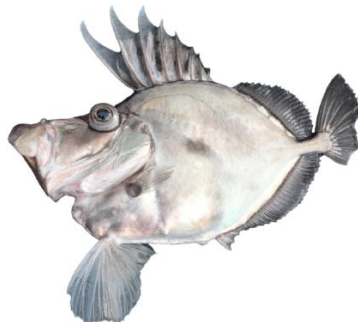


5.49 *Zenopsis nebulosa*, Mirror Dory

ZEIFORMES ZEIDAE (Dories)

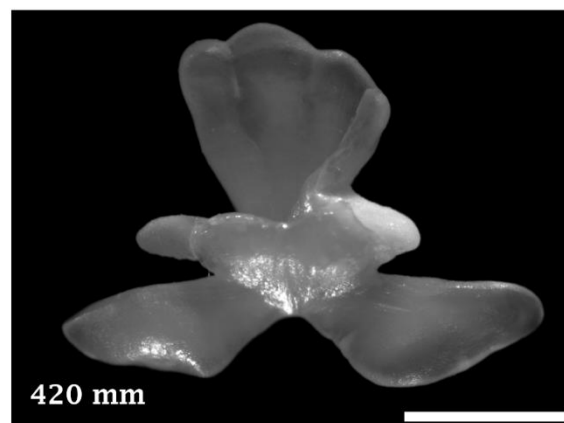
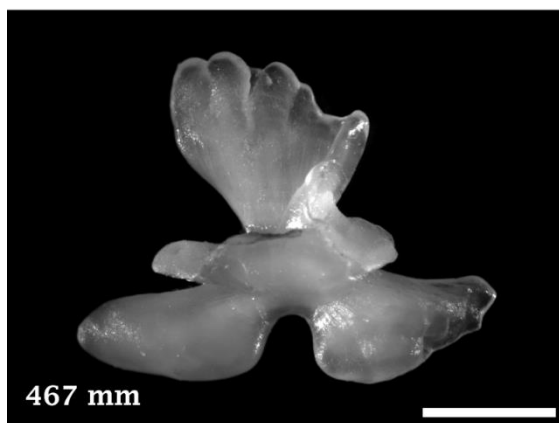
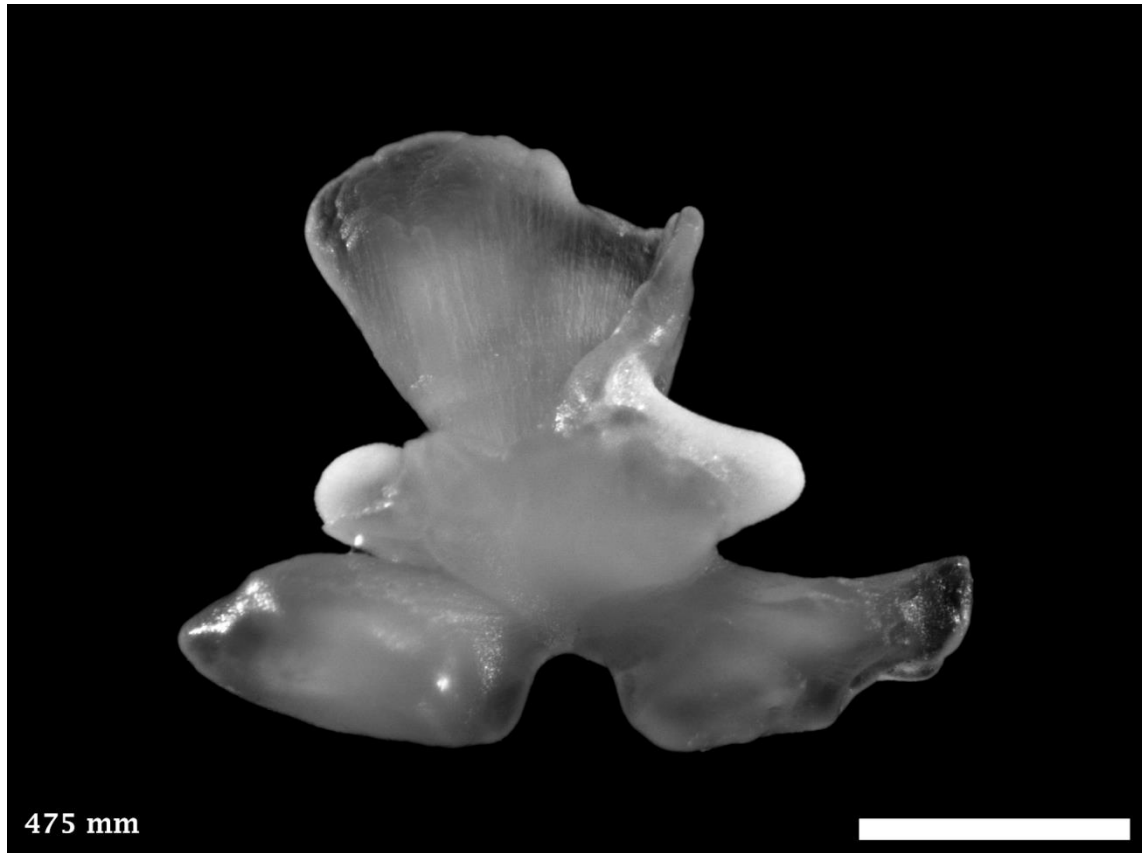


Distribution and Length: Coastal and offshore waters from Exmouth, WA south around to southern Queensland, including Tasmania. 750 mm TL.



5.50 *Zeus faber*, John Dory

ZEIFORMES ZEIDAE (Dories)

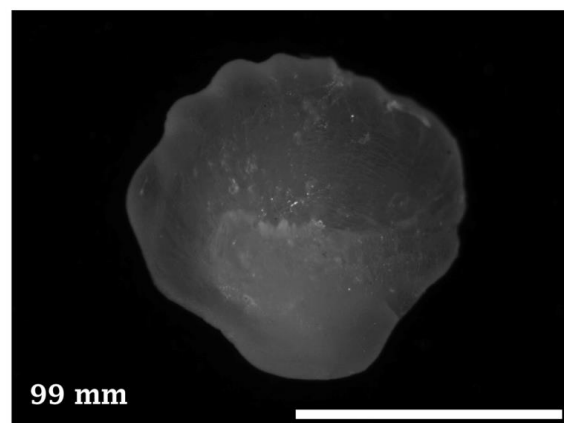
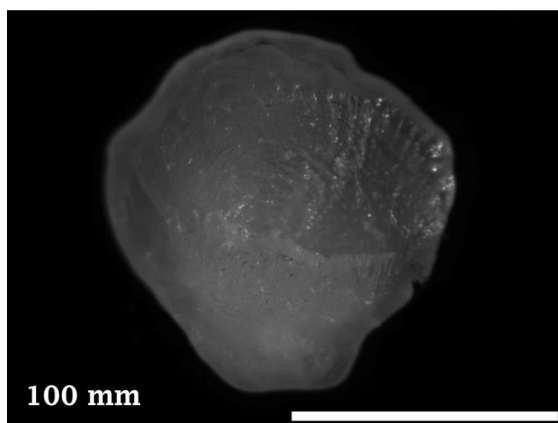
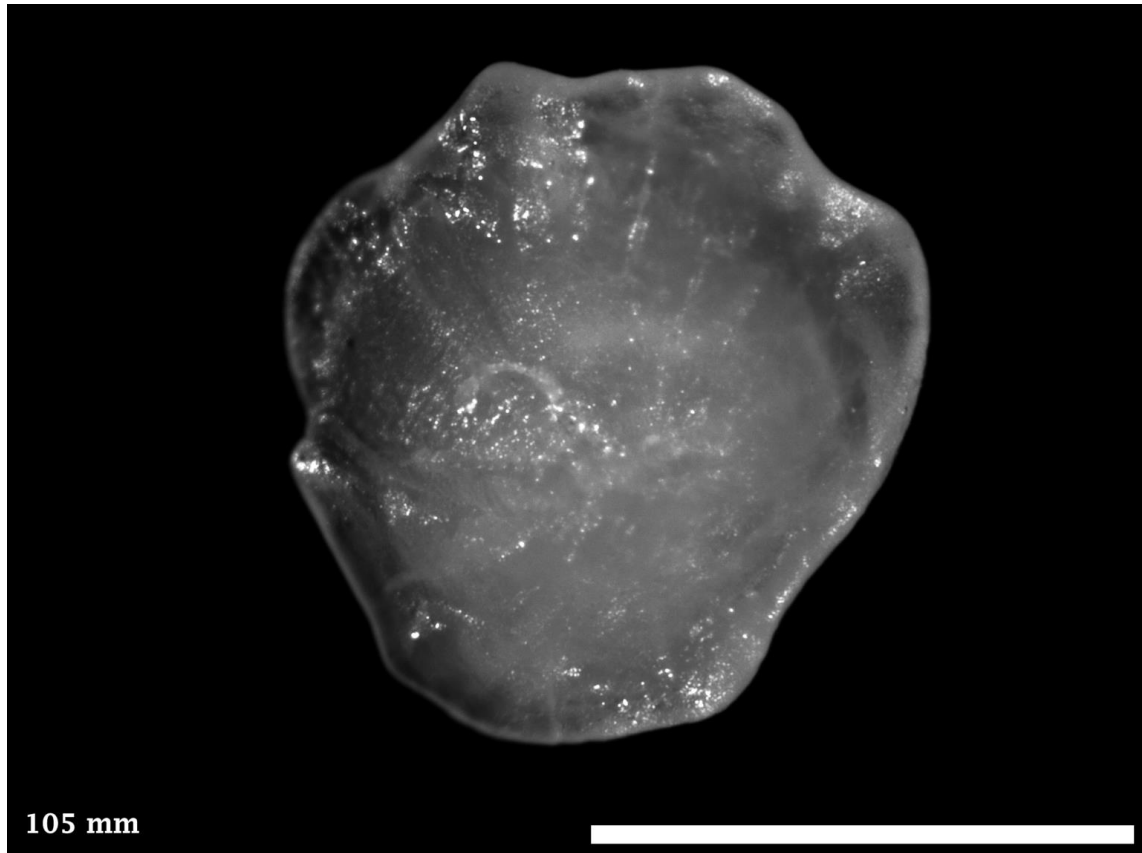


Distribution and Length: Coastal and offshore waters from Exmouth, WA south around to southern Queensland, including Tasmania. 750 mm TL.



5.51 *Pegasus volitans*, Slender Seamoth

SYNGNATHIFORMES PEGASIDAE (Seamoths)

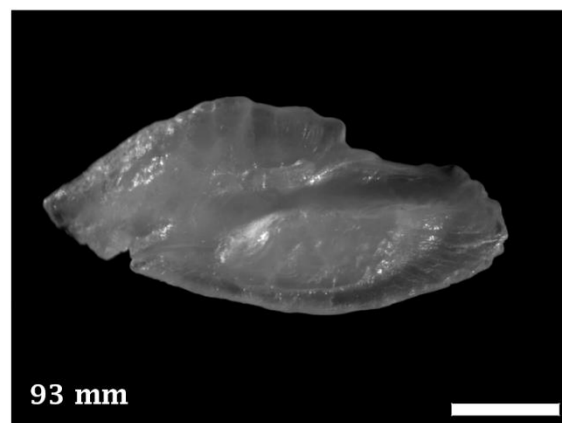
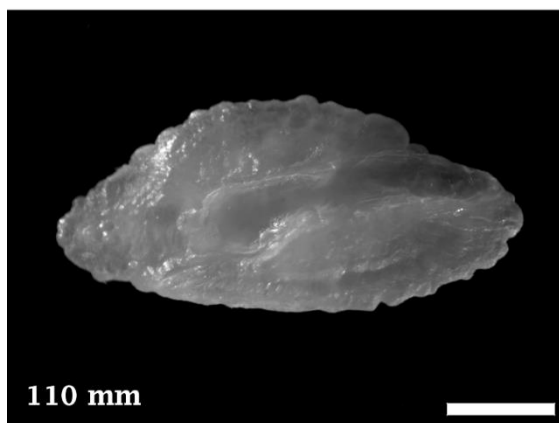
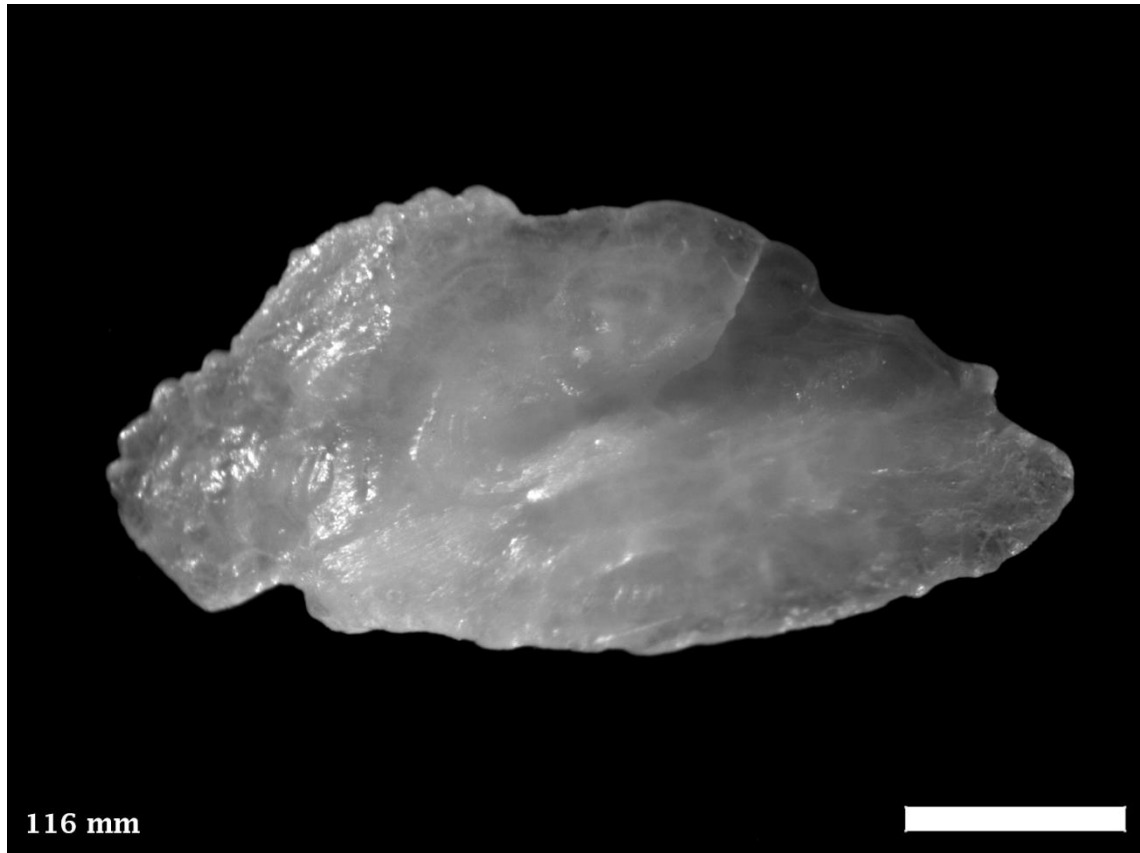


Distribution and Length: Estuarine and coastal waters from Fremantle, WA north around to Sydney, NSW. 160 mm TL.



5.52 *Dendrochirus brachypterus*, Dwarf Lionfish

SCORPAENIFORMES PTEROIDAE (Lionfishes)

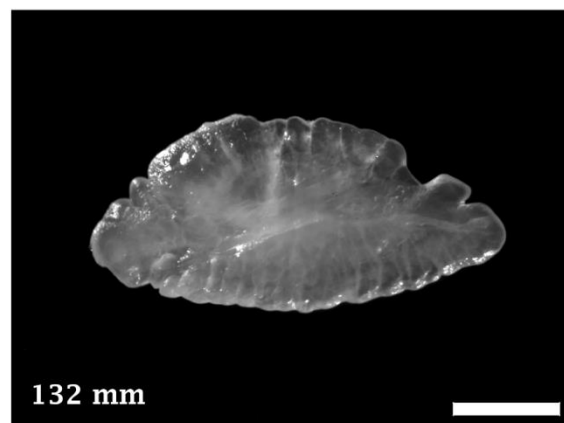
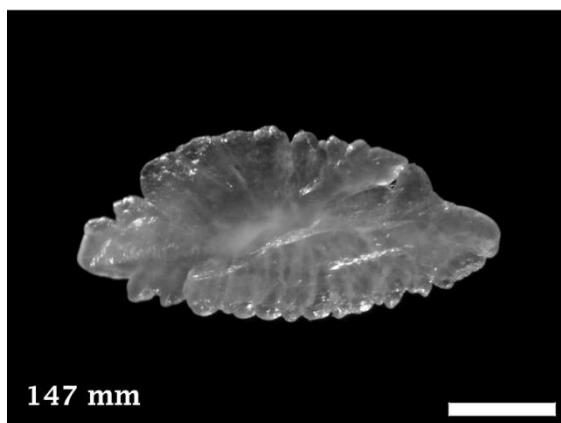
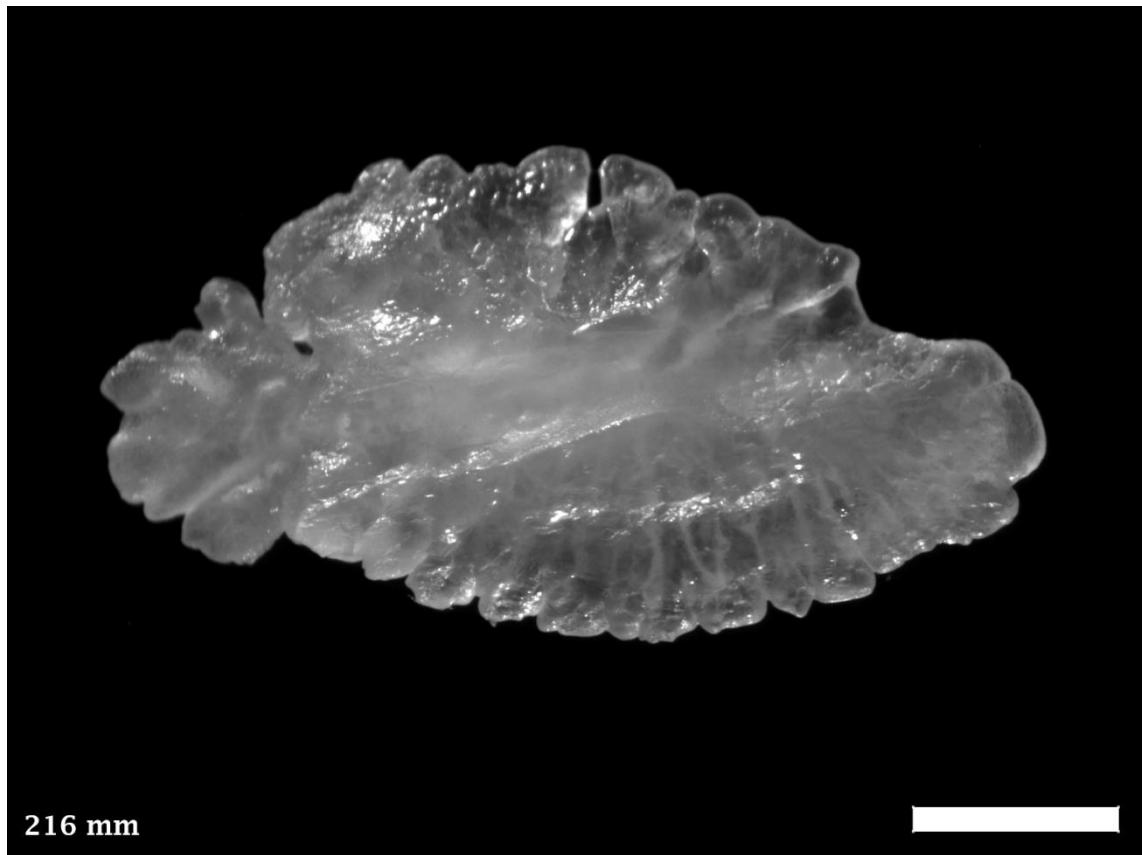


Distribution and Length: Coastal waters and coral reefs from Houtman Abrolhos, WA north around to mid NSW coast. 150 mm TL.



5.53 *Pterois russellii*, Plaintail Lionfish

SCORPAENIFORMES PTEROIDAE (Lionfishes)

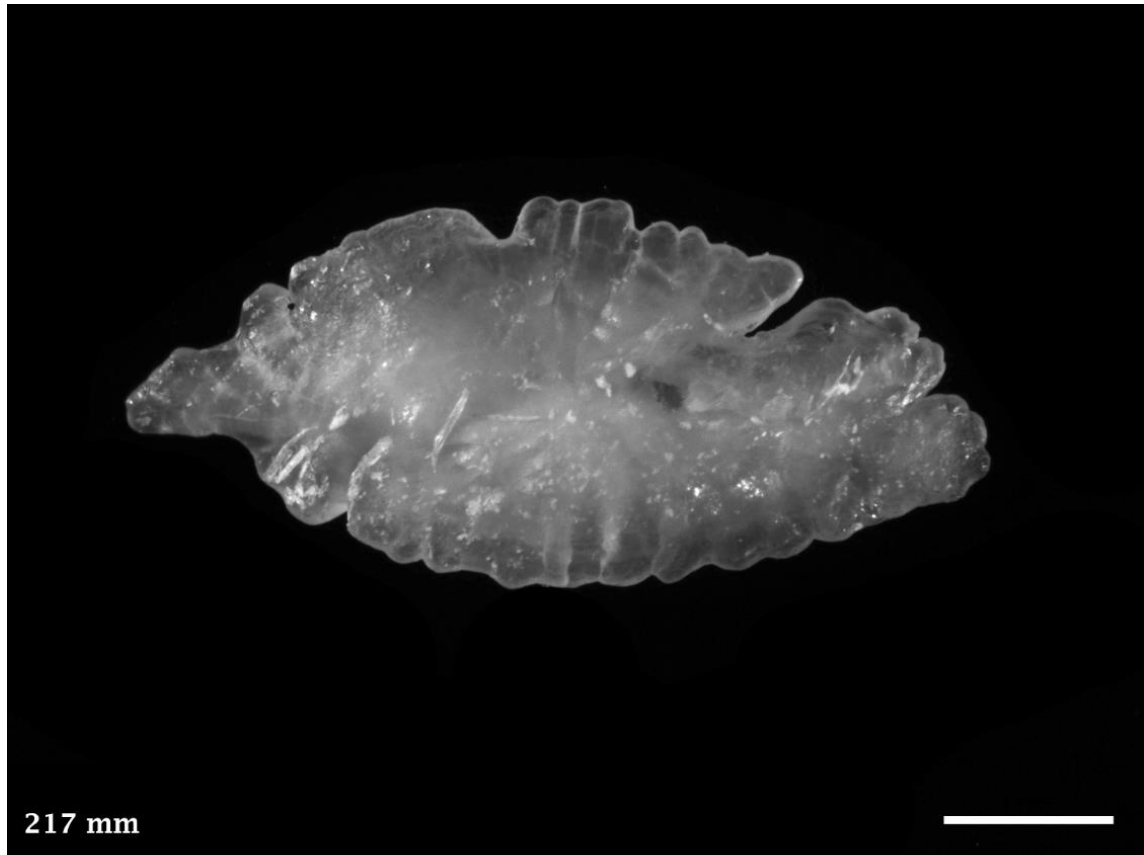


Distribution and Length: Offshore reefs from Rottnest Island, WA north around to Great Barrier Reef, Qld. 300 mm SL.



5.54 *Pterois volitans*, Common Lionfish

SCORPAENIFORMES PTEROIDAE (Lionfishes)

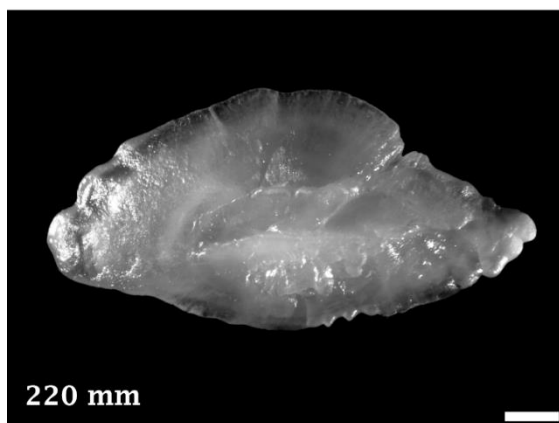
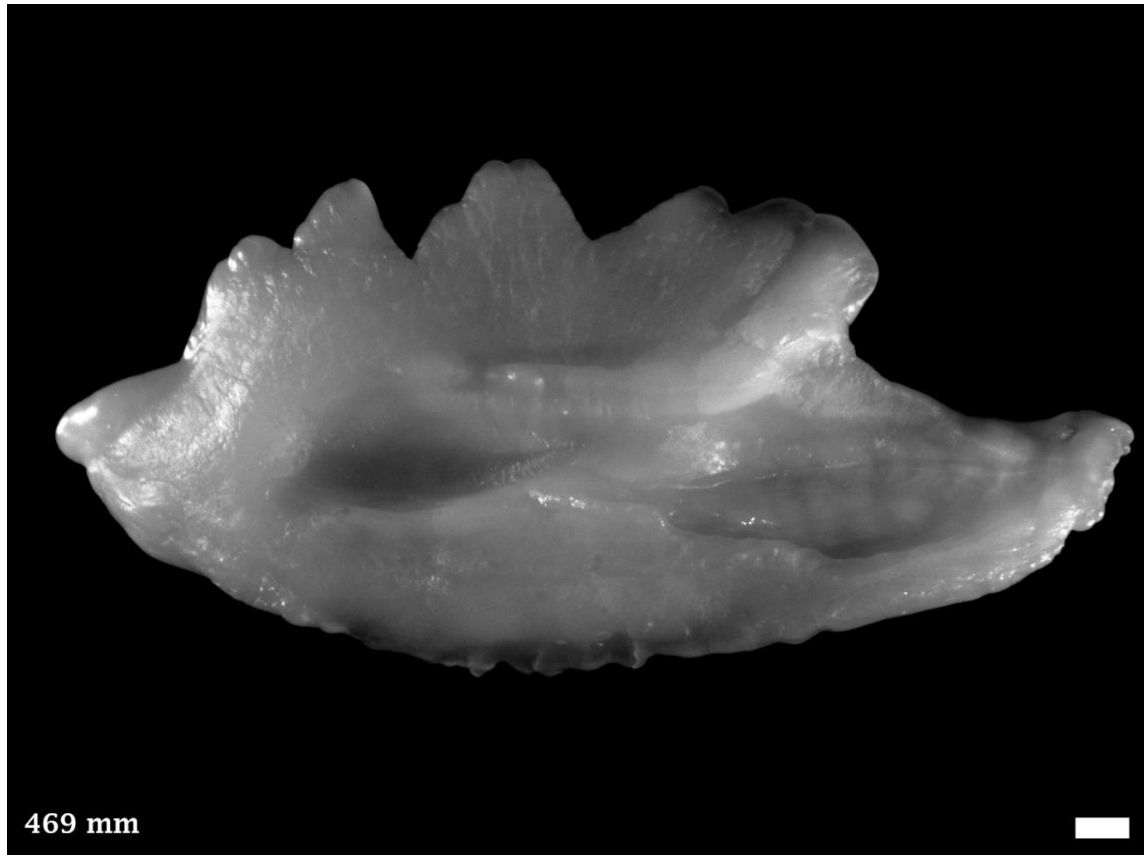


Distribution and Length: Coastal reefs and offshore islands from Fremantle, WA north around to Merimbula, NSW. 380 mm TL.



5.55 *Helicolenus barathri*, Bigeye Ocean Perch

SCORPAENIFORMES SEBASTIDAE (Ocean Perches)

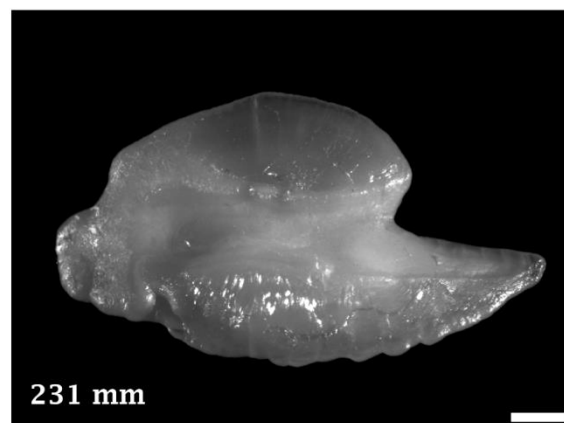
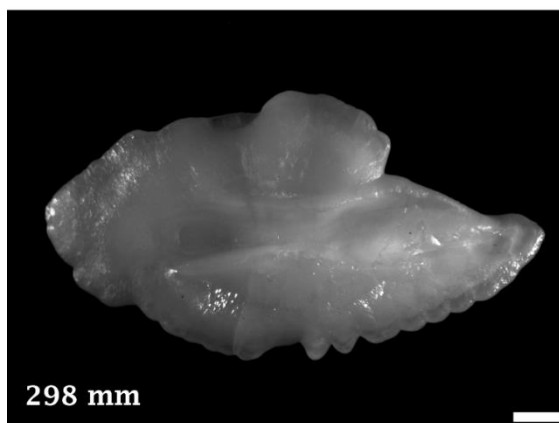
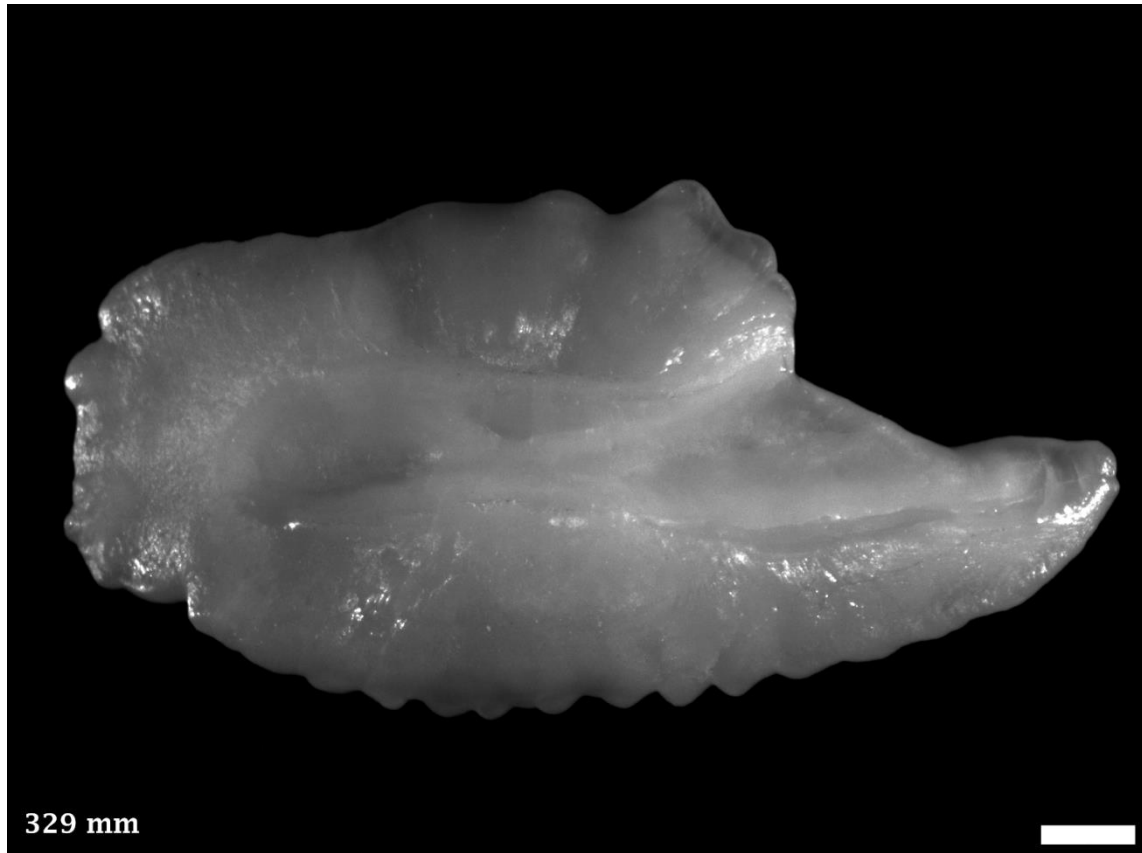


Distribution and Length: Coastal and offshore reefs from Zuytdorp Cliffs, WA south around to southern Qld, including Tasmania. 470 mm SL.



5.56 *Helicolenus percoides*, Reef Ocean Perch

SCORPAENIFORMES SEBASTIDAE (Ocean Perches)

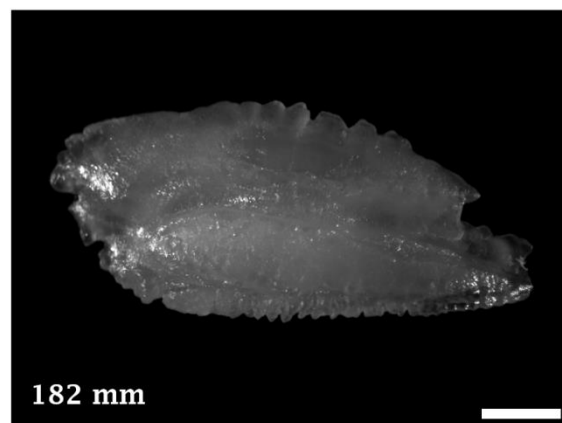
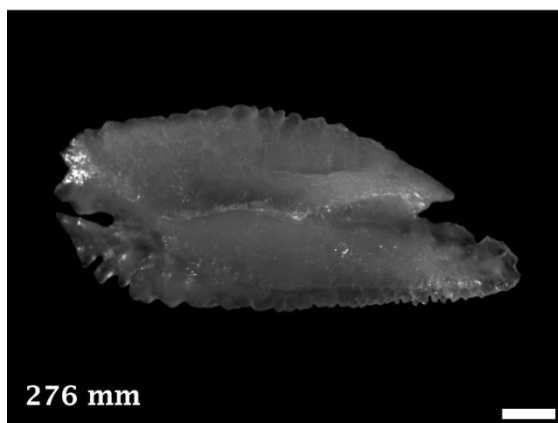
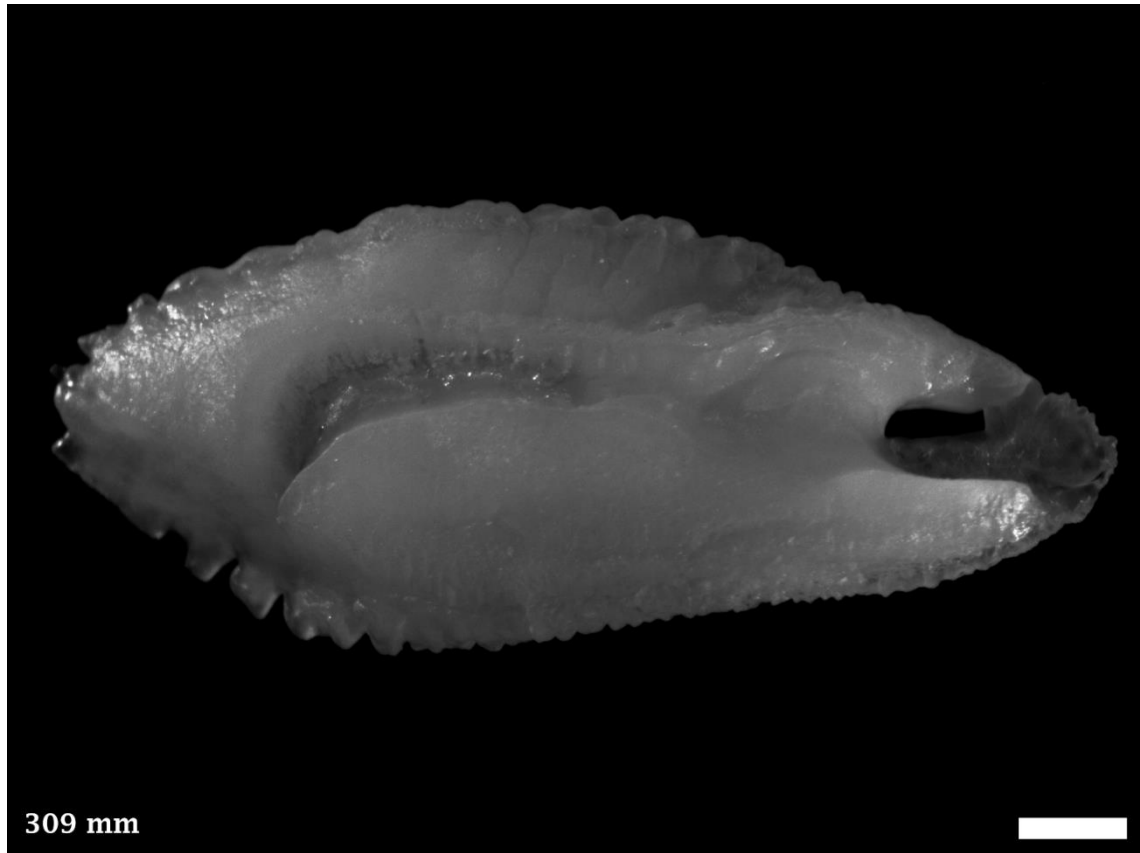


Distribution and Length: Coastal and offshore reefs from Fremantle, WA south around to northern NSW, including Tasmania. 400 mm SL.



5.57 *Neosebastes bougainvillii*, Gulf Gurnard Perch

SCORPAENIFORMES NEOSEBASTIDAE (Gurnard Perches)

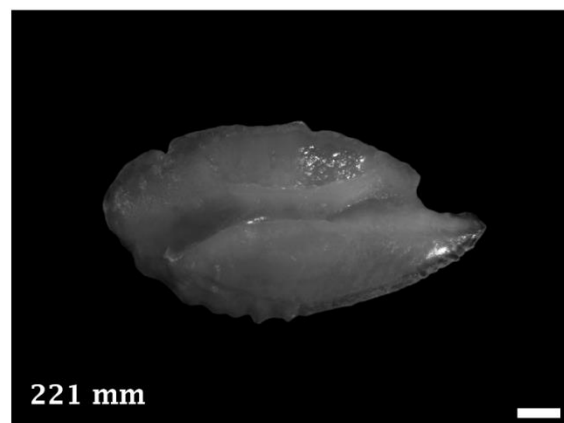
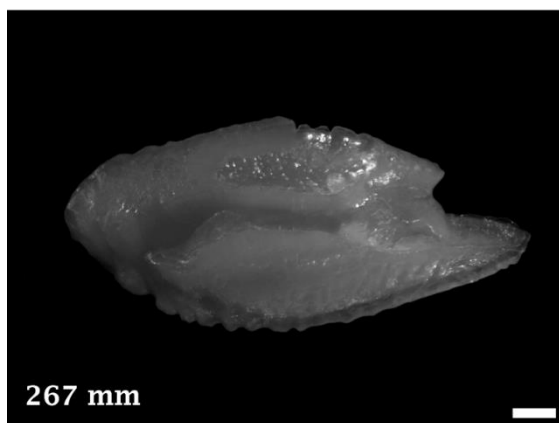
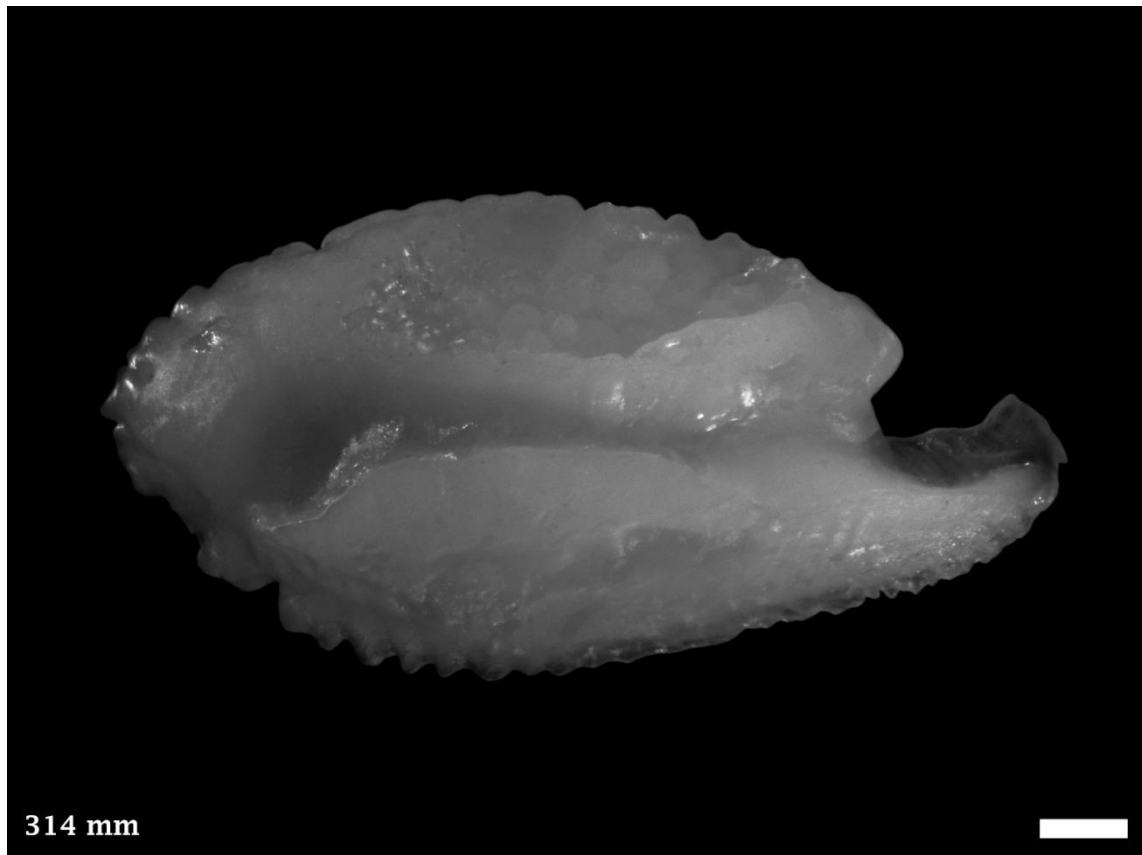


Distribution and Length: Coastal and offshore reefs from Houtman Abrolhos, WA south around to Kangaroo Island, SA. 400 mm TL.



5.58 *Neosebastes nigropunctatus*, Blackspotted Gurnard Perch

SCORPAENIFORMES NEOSEBASTIDAE (Gurnard Perches)

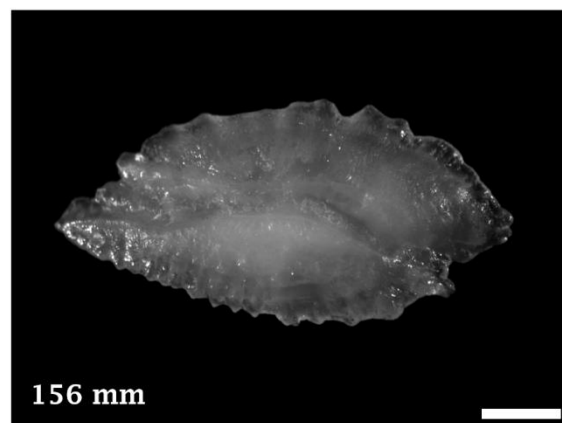
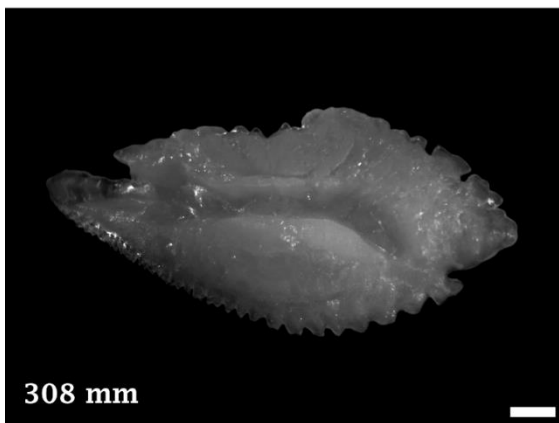
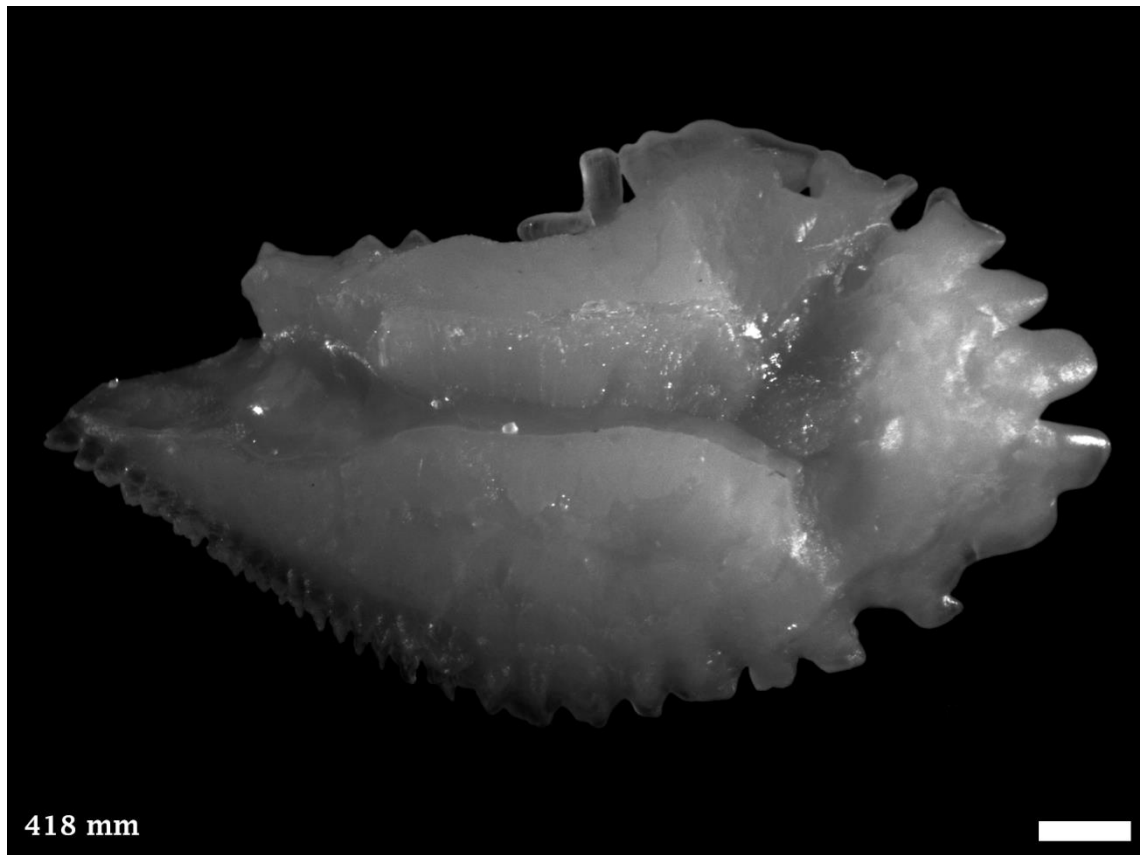


Distribution and Length: Deep offshore waters from Houtman Abrolhos, WA south around to Kangaroo Island, SA. 400 mm SL.



5.59 *Neosebastes pandus*, Bighead Gurnard Perch

SCORPAENIFORMES NEOSEBASTIDAE (Gurnard Perches)

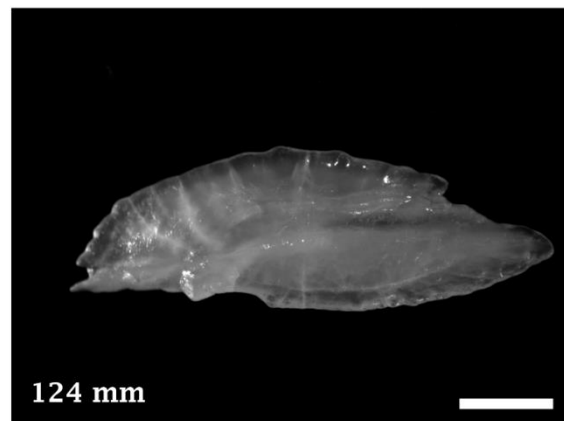
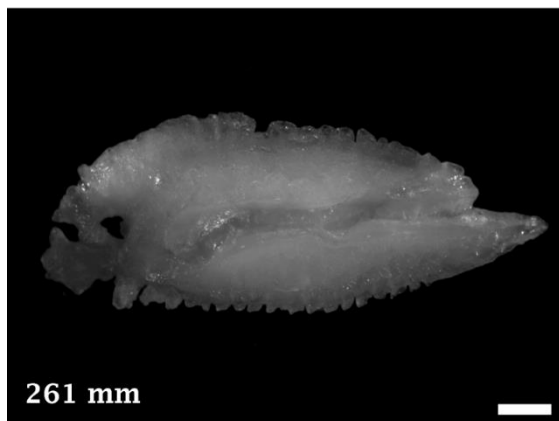
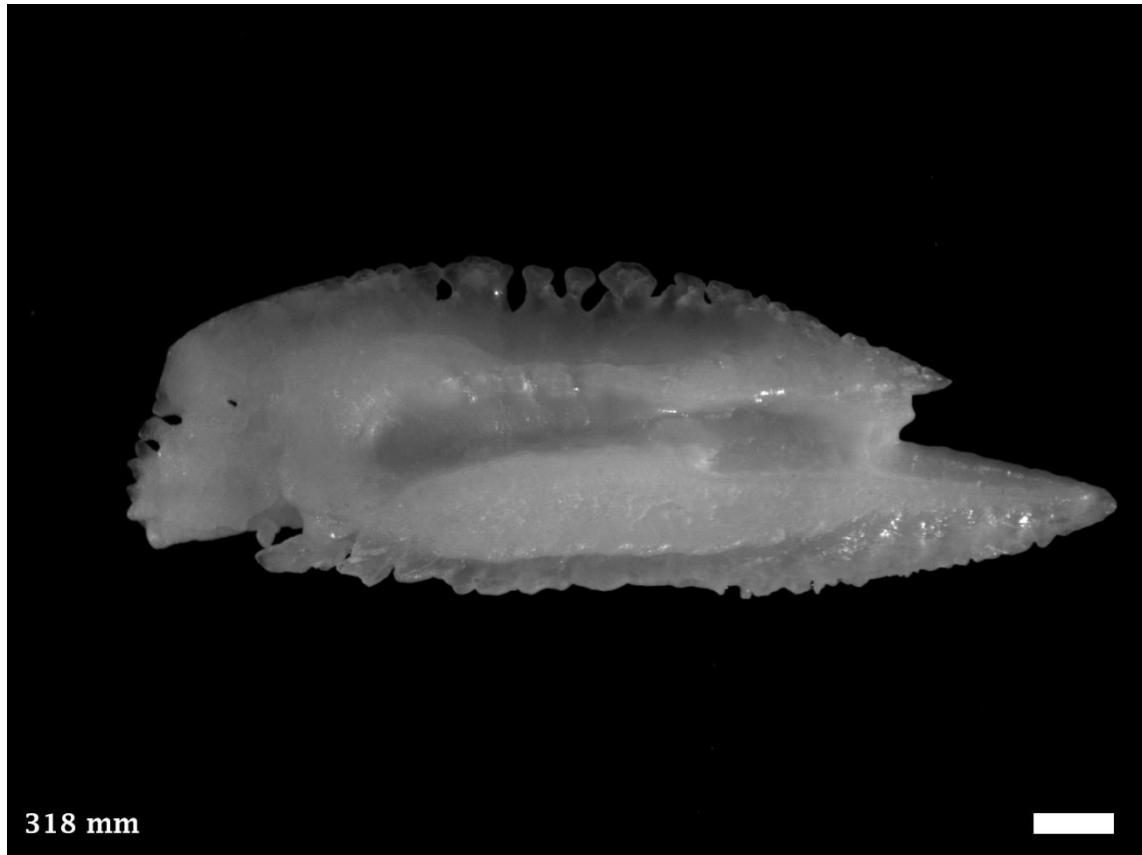


Distribution and Length: Coastal and offshore waters from Houtman Abrolhos, WA south around to Kangaroo Island, SA. Note: Right otoliths. 480 mm SL.



5.60 *Scorpaena sumptuosa*, Western Red Scorpionfish

SCORPAENIFORMES SCORPAENIDAE (Scorpionfishes)

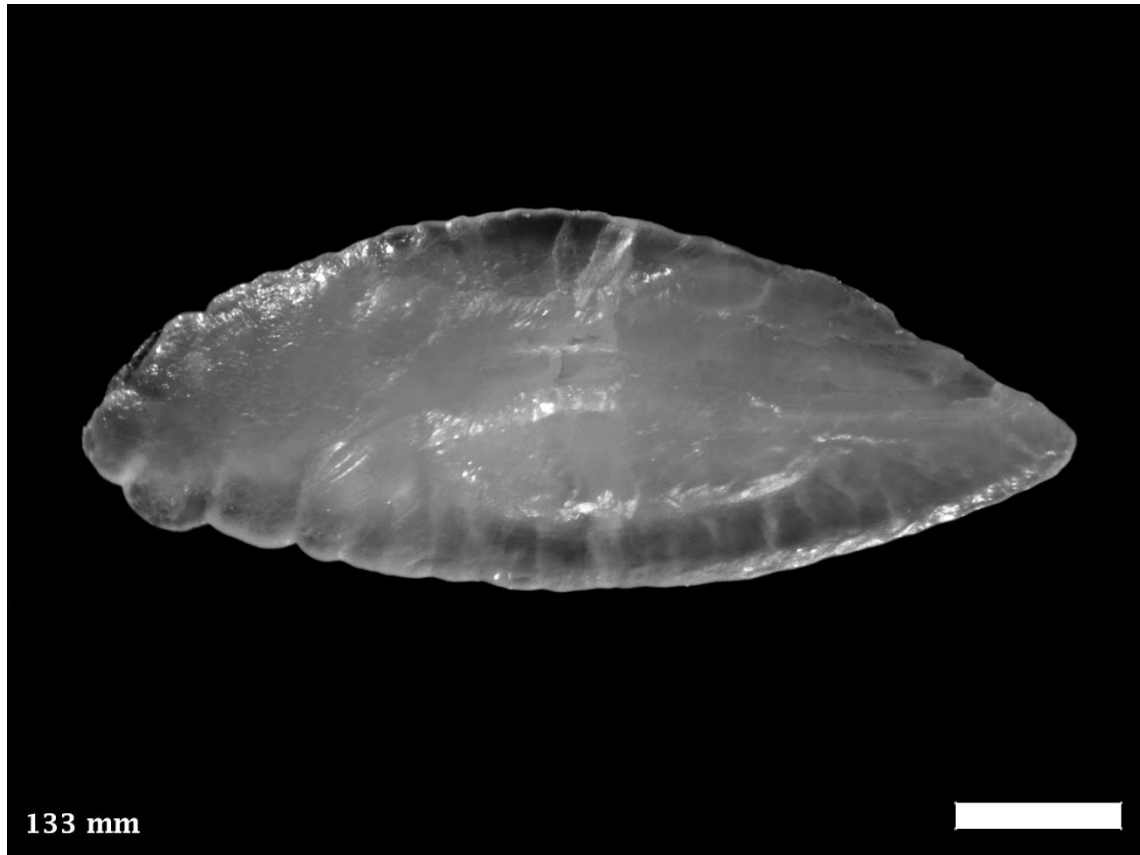


Distribution and Length: Coastal waters from Point Quobba, WA south to Esperance, WA. 400 mm SL.



5.61 *Scorpaenodes steenei*, Steene's Scorpionfish

SCORPAENIFORMES SCORPAENIDAE (Scorpionfishes)

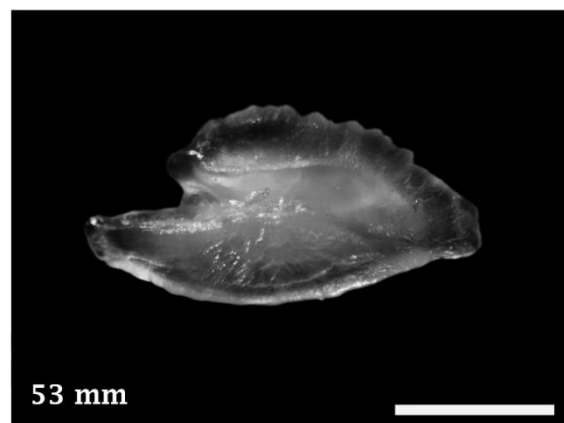
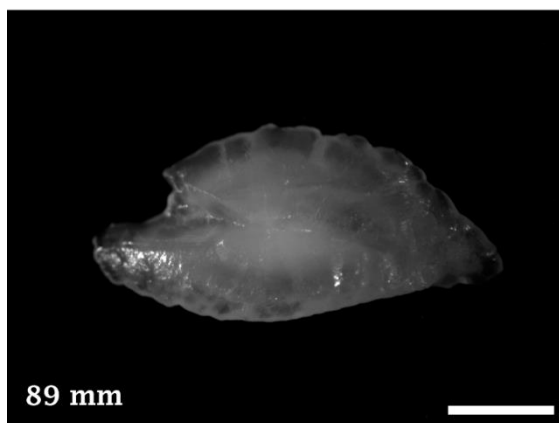
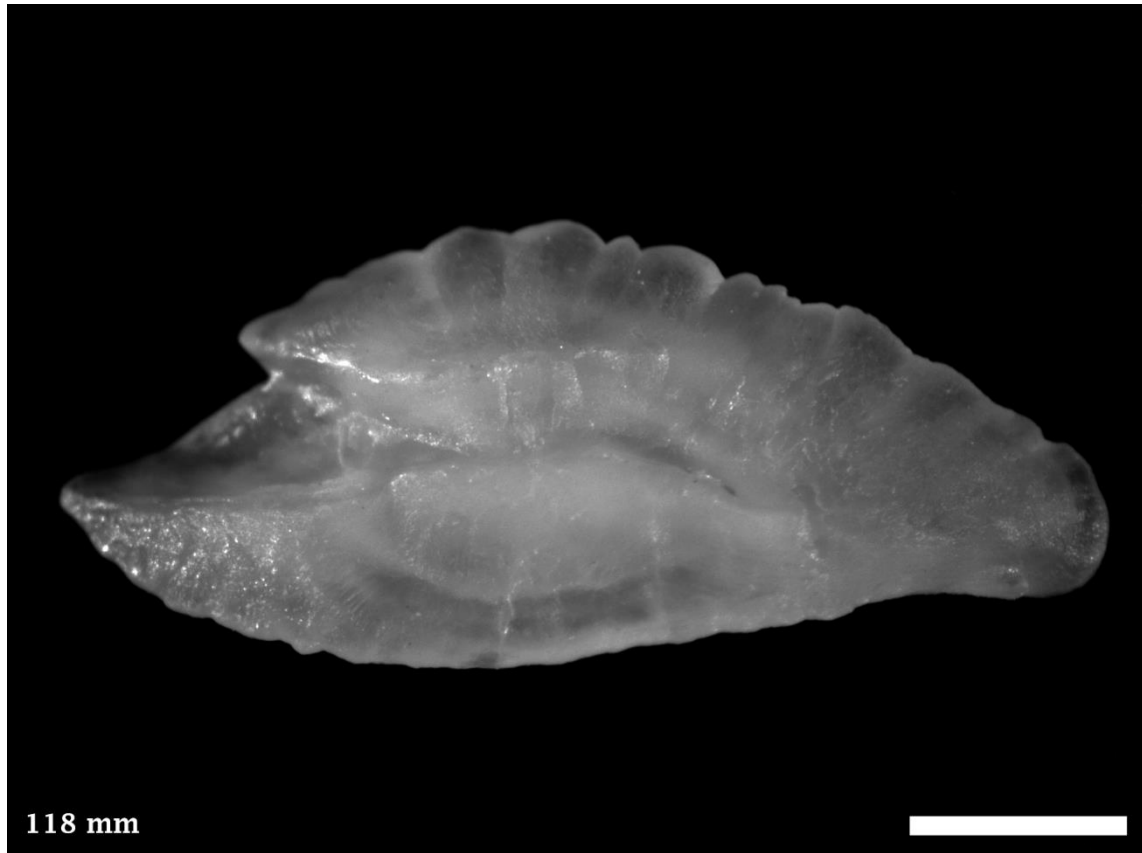


Distribution and Length: Coastal waters from Point Quobba, WA south to Esperance, WA. 400 mm SL.



5.62 *Gymnapistes marmoratus*, Soldier

SCORPAENIFORMES TETRAROVIDAE (Fortescues)

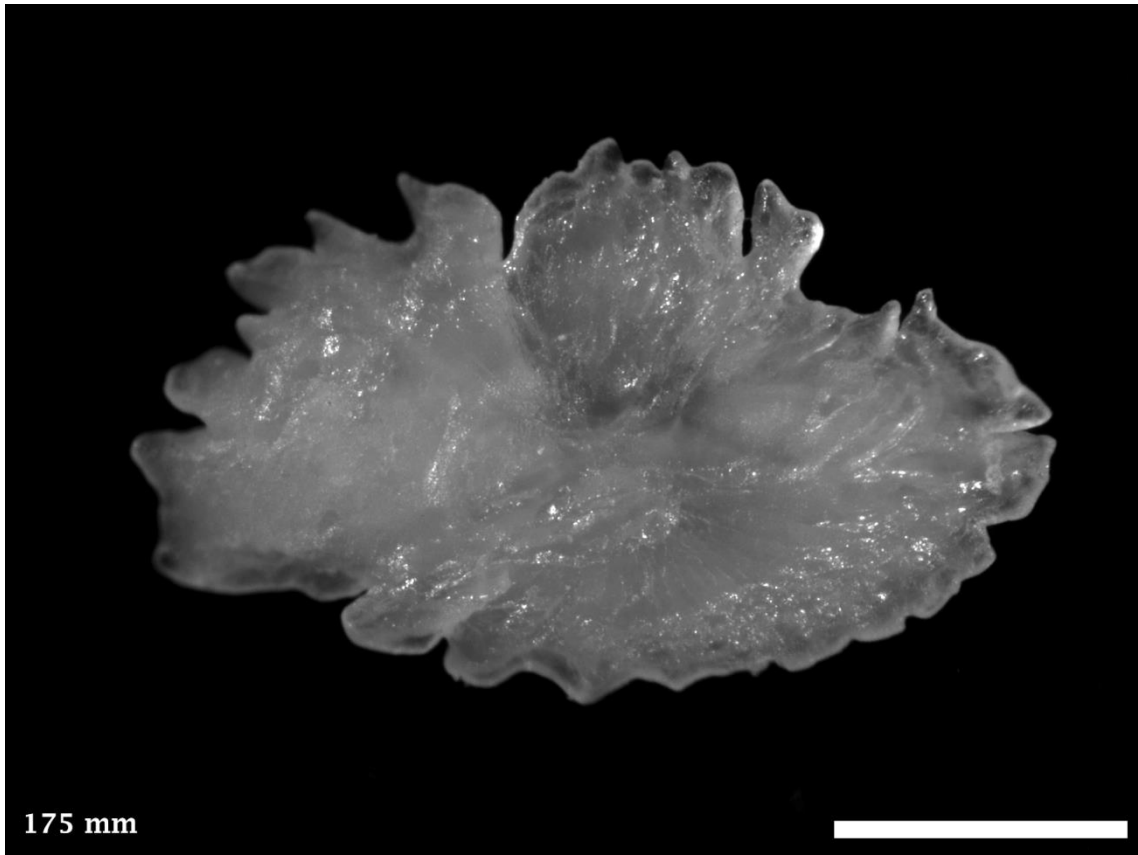


Distribution and Length: Estuarine and coastal waters from Fremantle, WA south around to Sydney, NSW, including Tasmania. Note: Right otoliths. 230 mm TL.



5.63 *Aetapcus maculatus*, Warty Prowfish

SCORPAENIFORMES PATAECIDAE (Prowfishes)

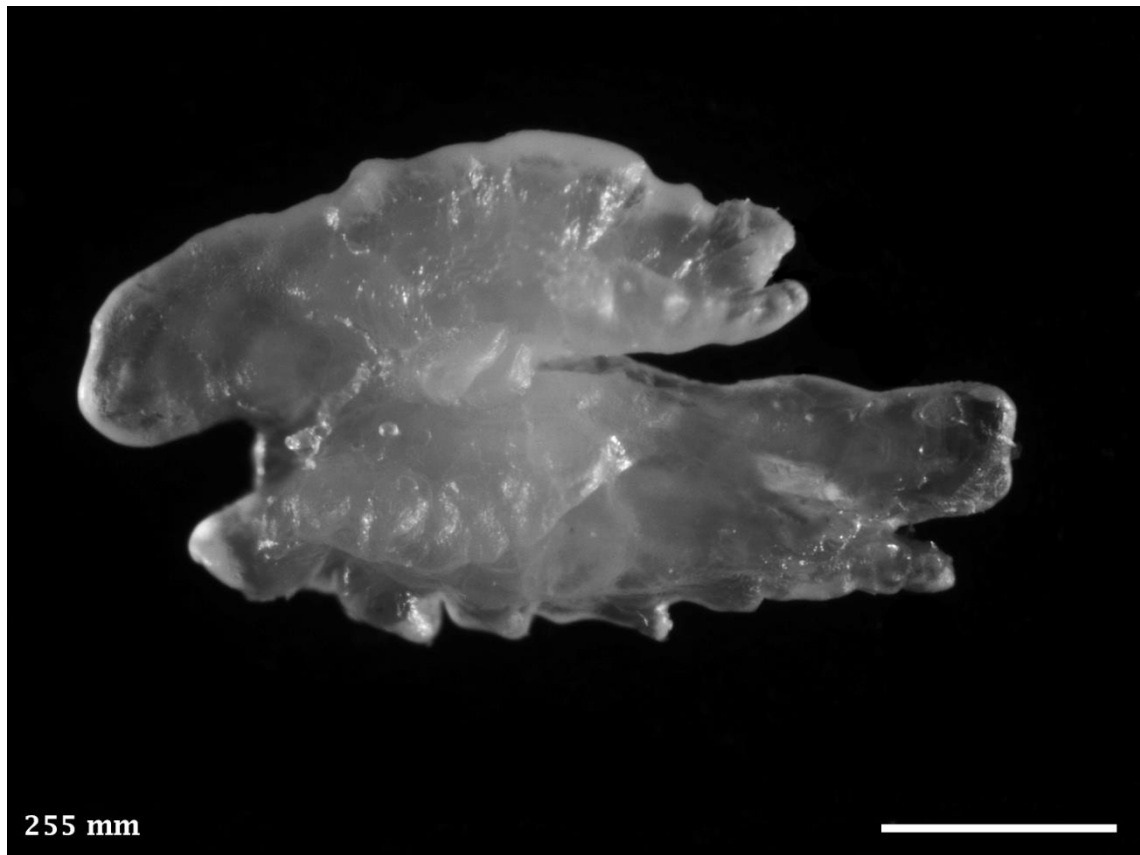


Distribution and Length: Sheltered coastal waters from Lancelin, WA south around Victoria, including Tasmania. 220 mm SL.



5.64 *Gnathanacanthus goetzeei*, Red Velvetfish

SCORPAENIFORMES GNATHANACANTHIDAE (Red Velvetfishes)

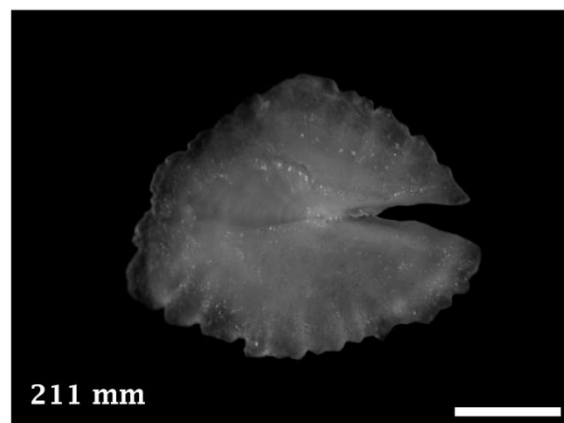
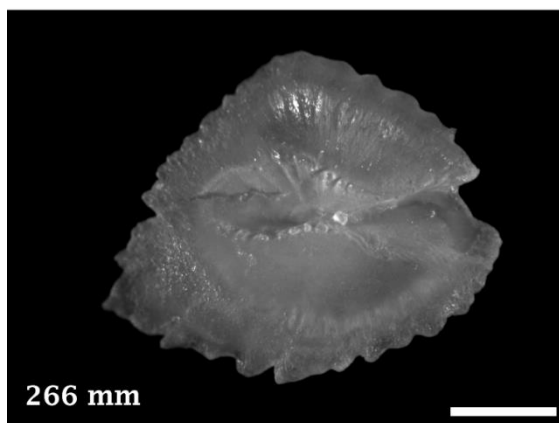
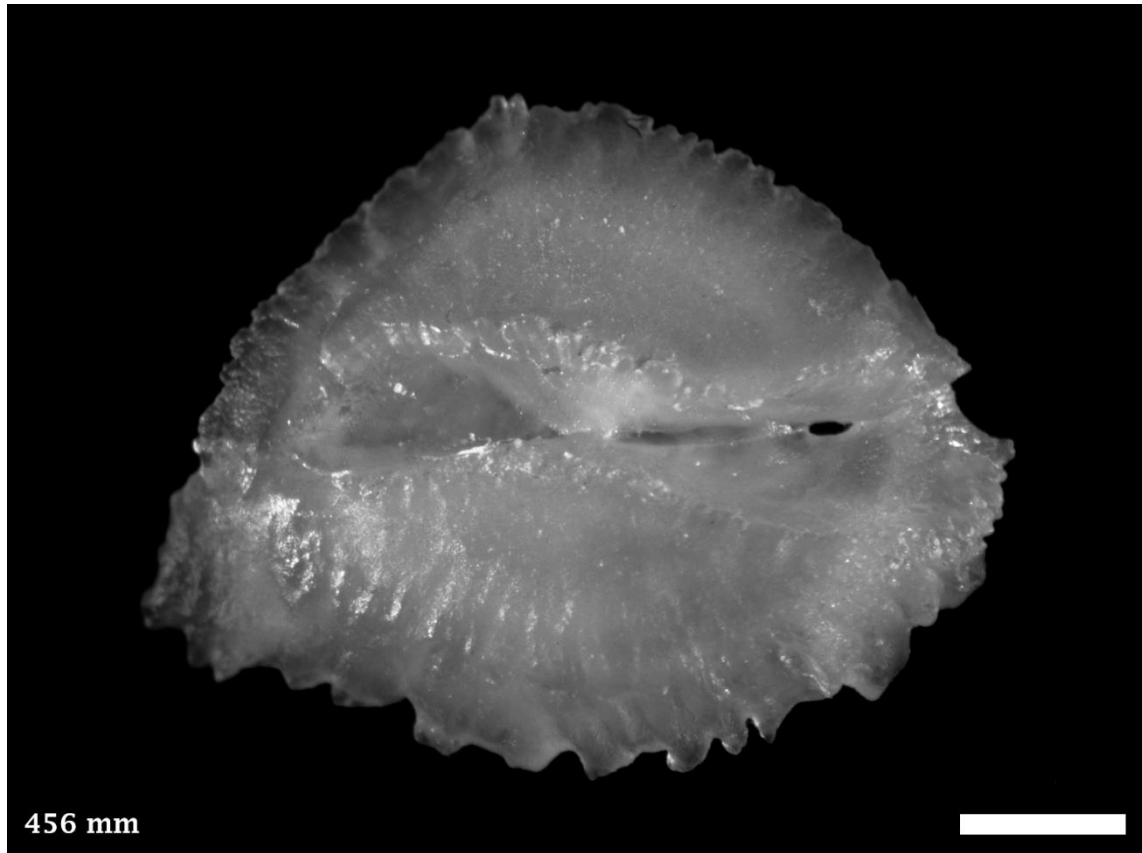


Distribution and Length: Protected reefs and coastal waters from Jurien Bay, WA south around to Wilson's Promontory, Victoria, including Tasmania. 460 mm TL.



5.65 *Chelidonichthys kumu*, Red Gurnard

SCORPAENIFORMES TRIGLIDAE (Searobins)

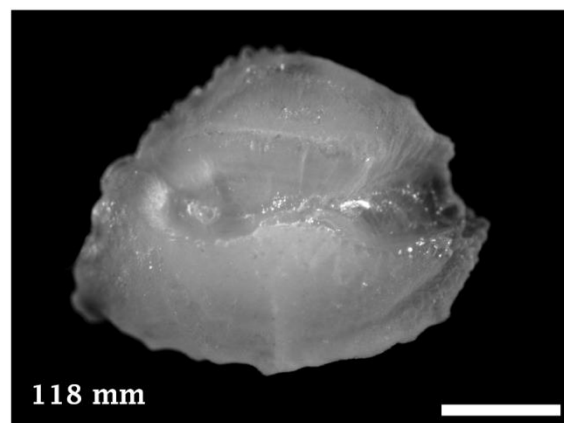
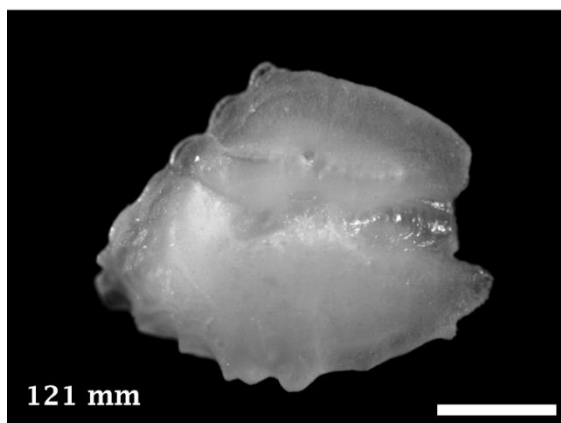
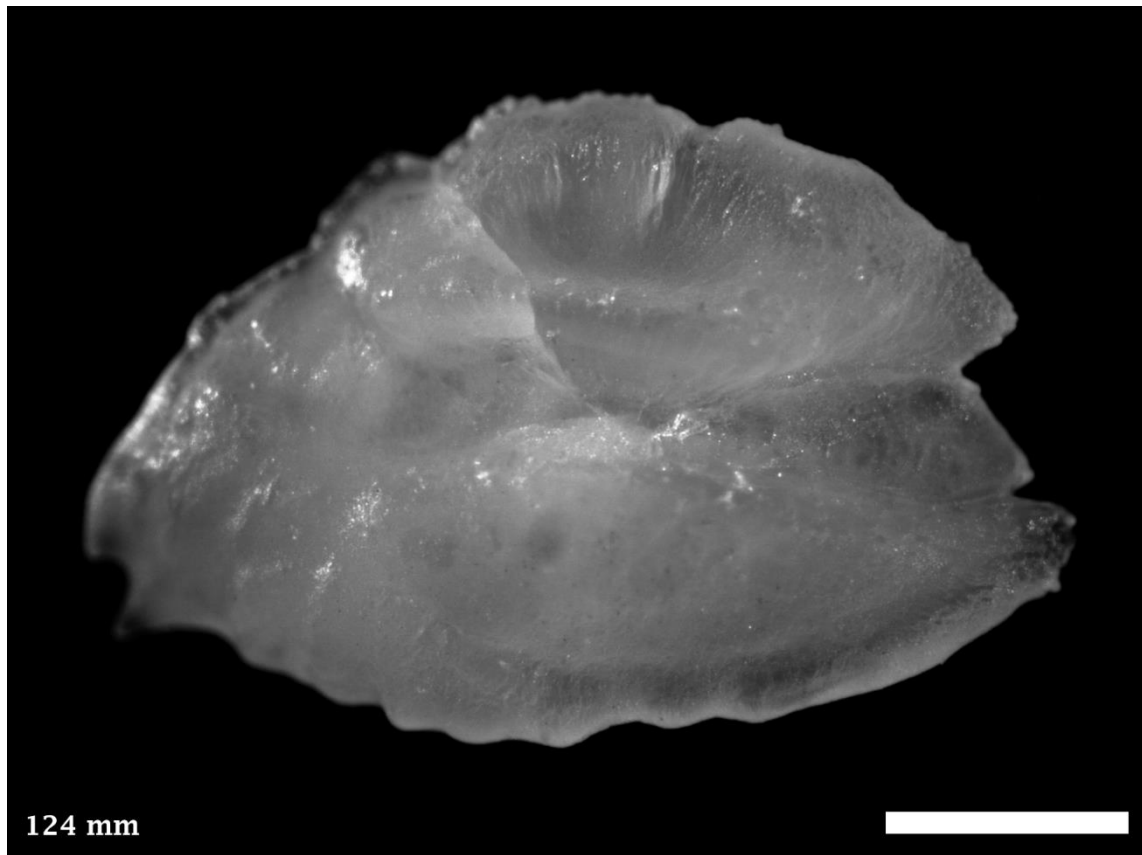


Distribution and Length: Coastal waters from Shark Bay, WA south around to southern Queensland, including Tasmania. 600 mm TL.



5.66 *Lepidotrigla papilio*, Spiny Gurnard

SCORPAENIFORMES TRIGLIDAE (Searobins)

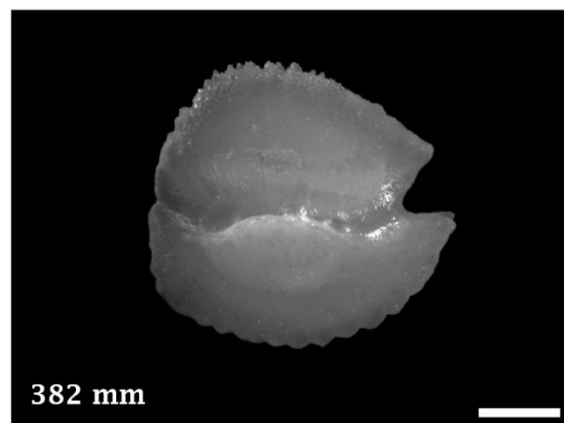
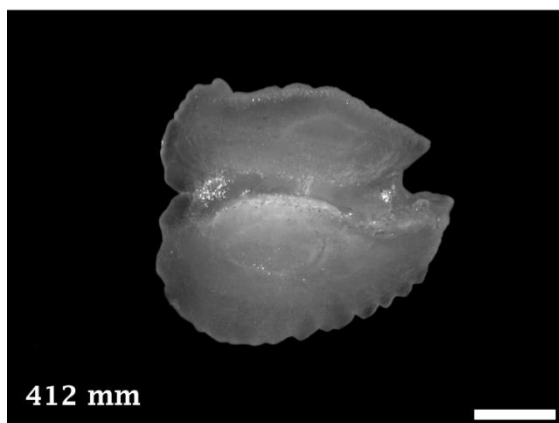
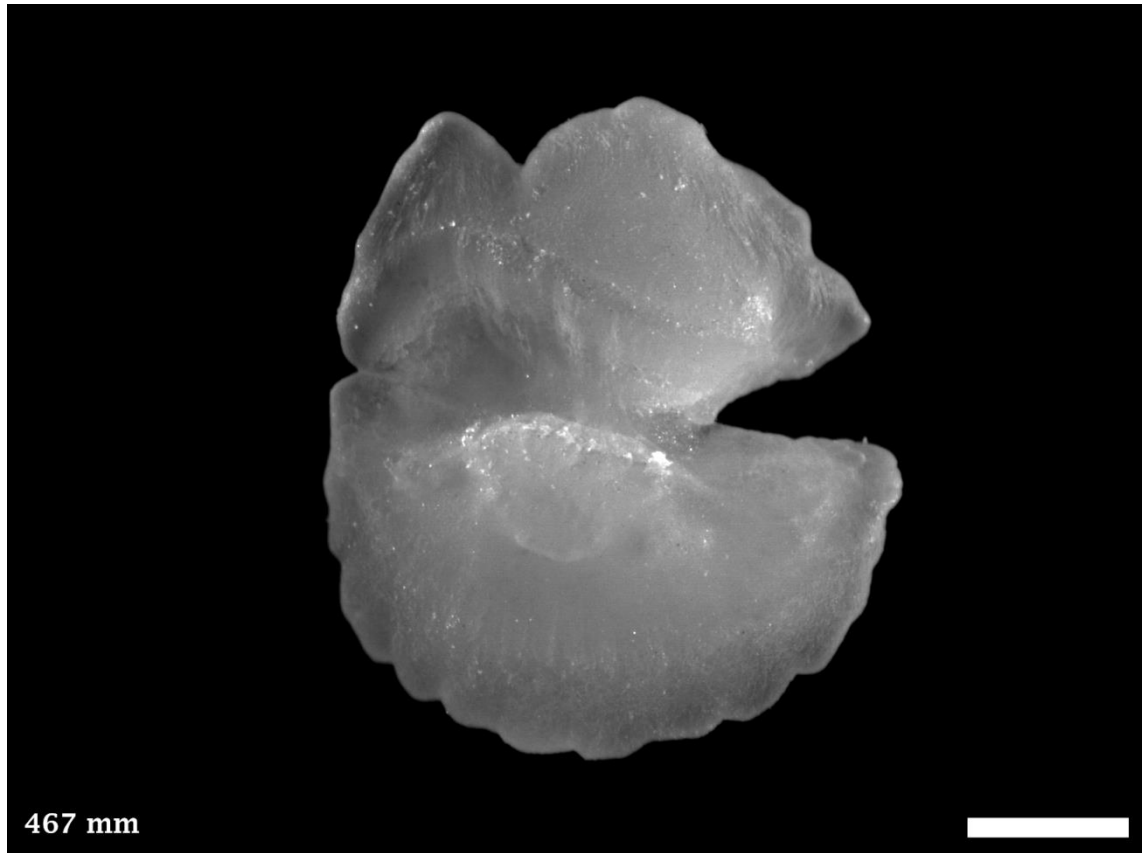


Distribution and Length: Coastal waters from Fremantle, WA south around to southern Queensland, including Tasmania. 200 mm SL.



5.67 *Pterygotrigla polyommata*, Latchet

SCORPAENIFORMES TRIGLIDAE (Searobins)

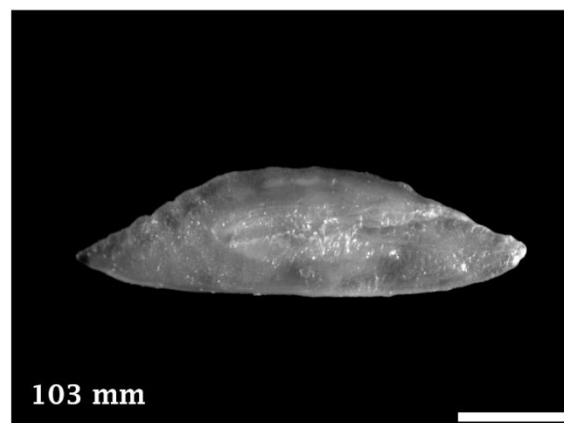
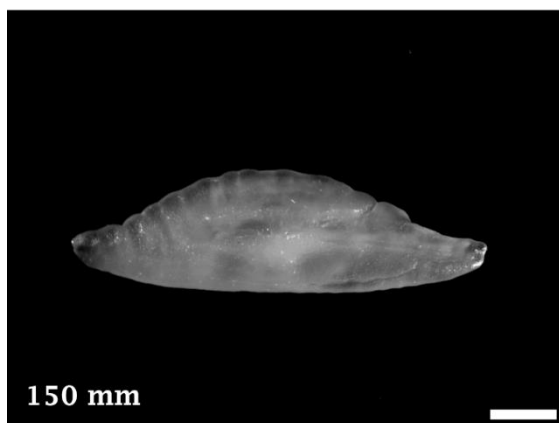


Distribution and Length: Coastal waters from Fremantle, WA south around to Sydney, NSW, including Tasmania. 500 mm SL.



5.68 *Inegocia japonica*, Rusty Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

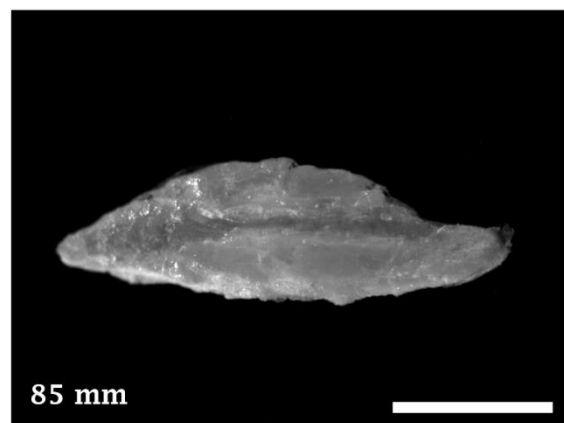
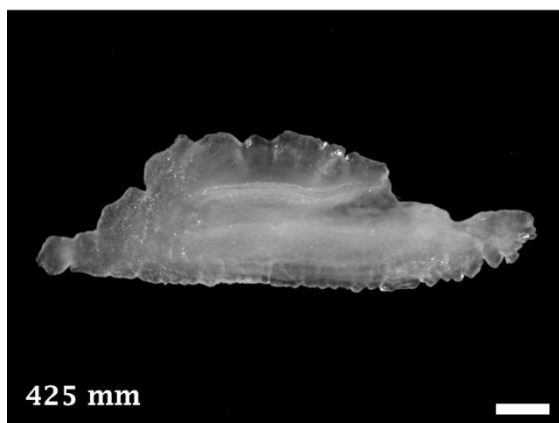
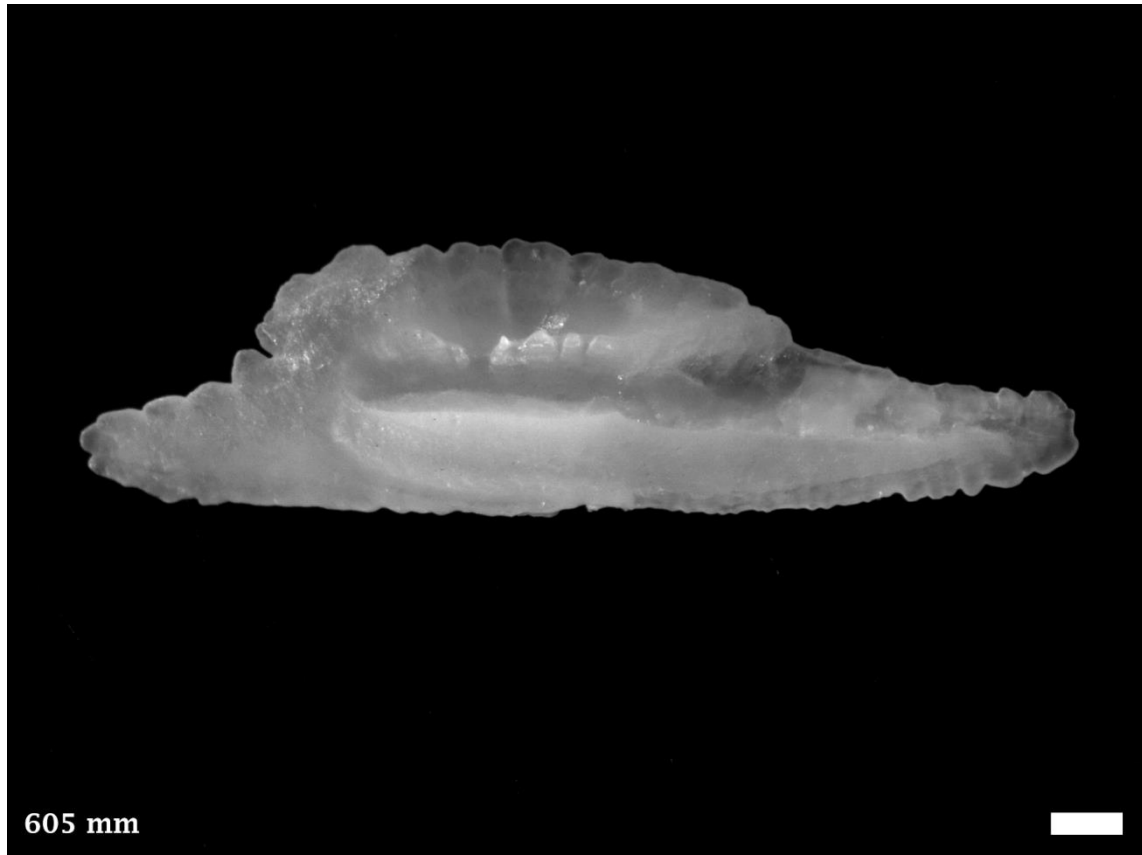


Distribution and Length: Coastal waters from Cockburn Sound, WA north around to the West Pacific (Allen 1997). 200 mm TL.



5.69 *Leviprora inops*, Longhead Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

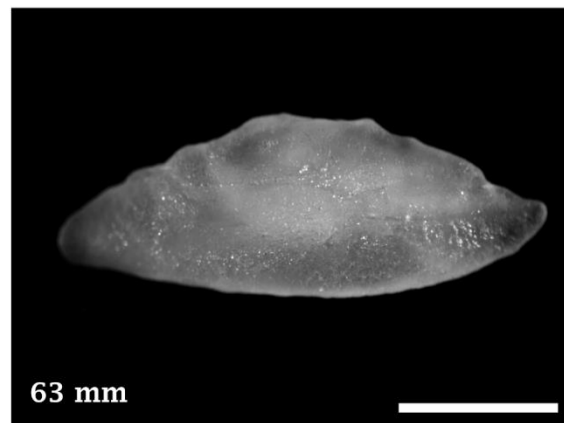
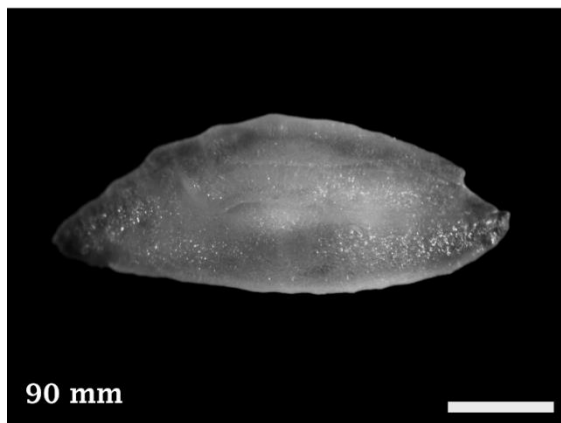
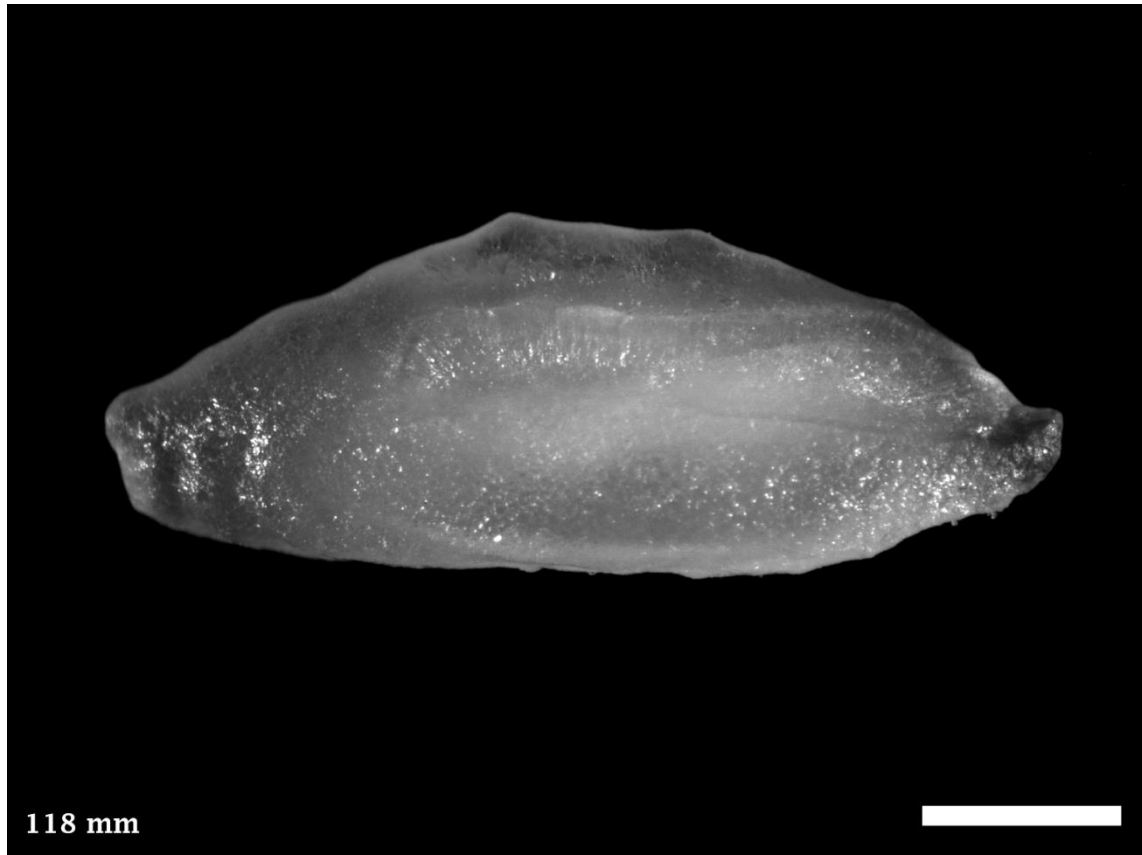


Distribution and Length: Coastal waters from the Swan River, WA south around to Kangaroo Island, SA. 670 mm TL.



5.70 *Onigocia c.f. spinosa*, like Midget Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

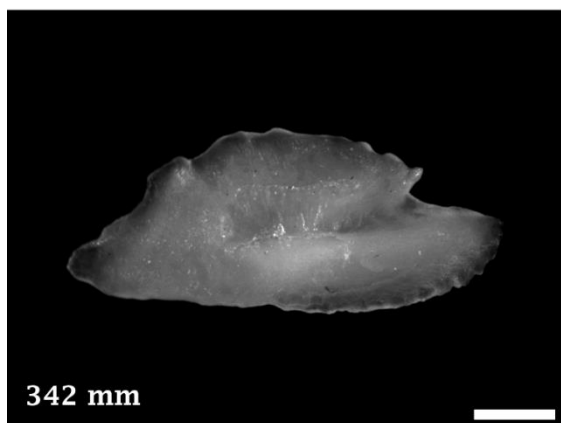
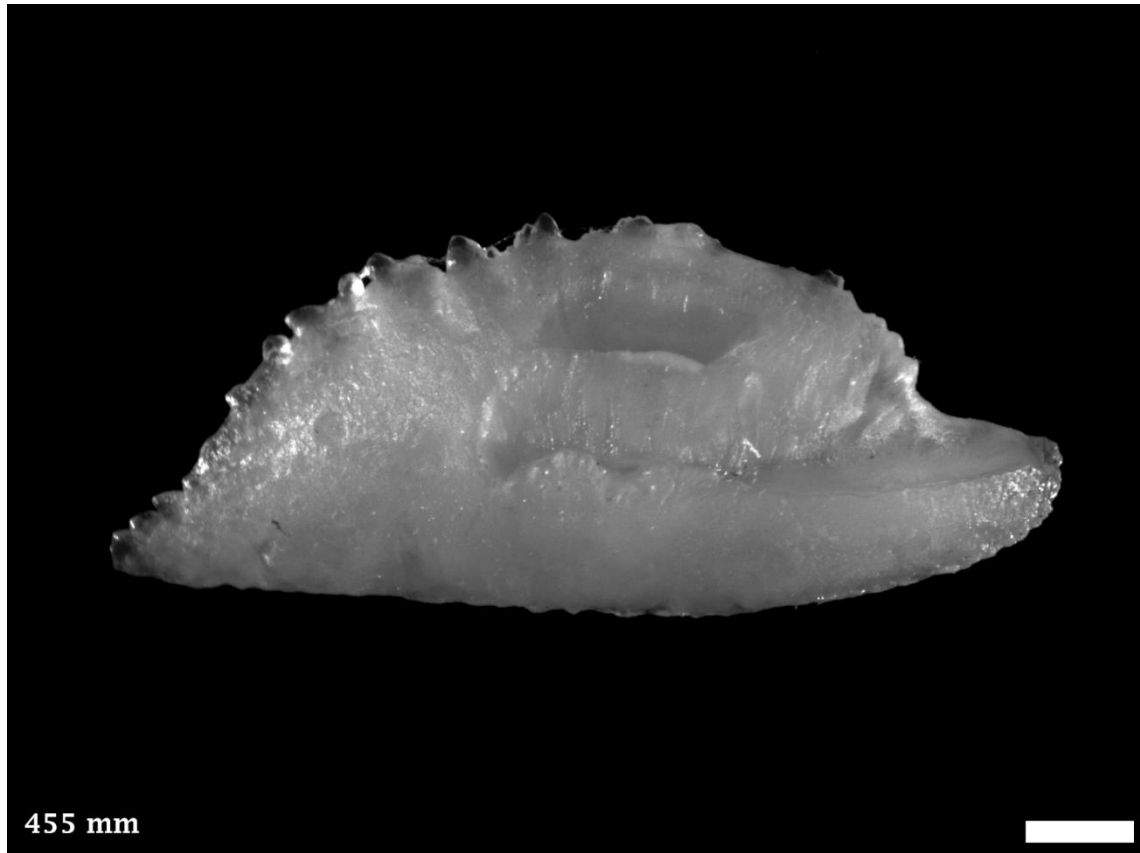


Distribution and Length: Coastal waters from Cockburn Sound, WA north around to Townsville, Qld. 110 mm SL.



5.71 *Platycephalus chauliodous*, Bigtooth Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

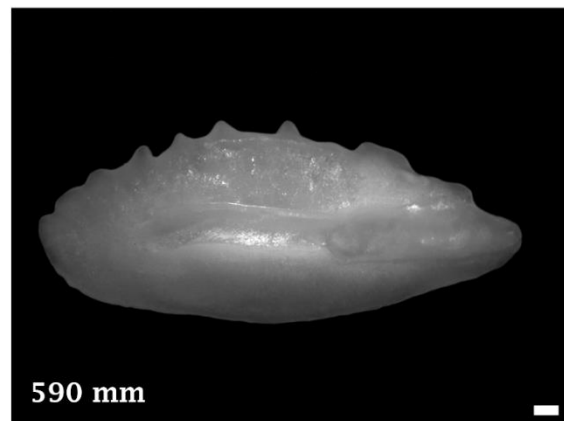
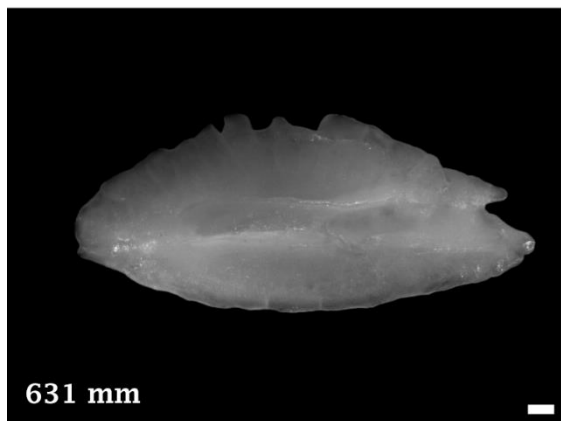
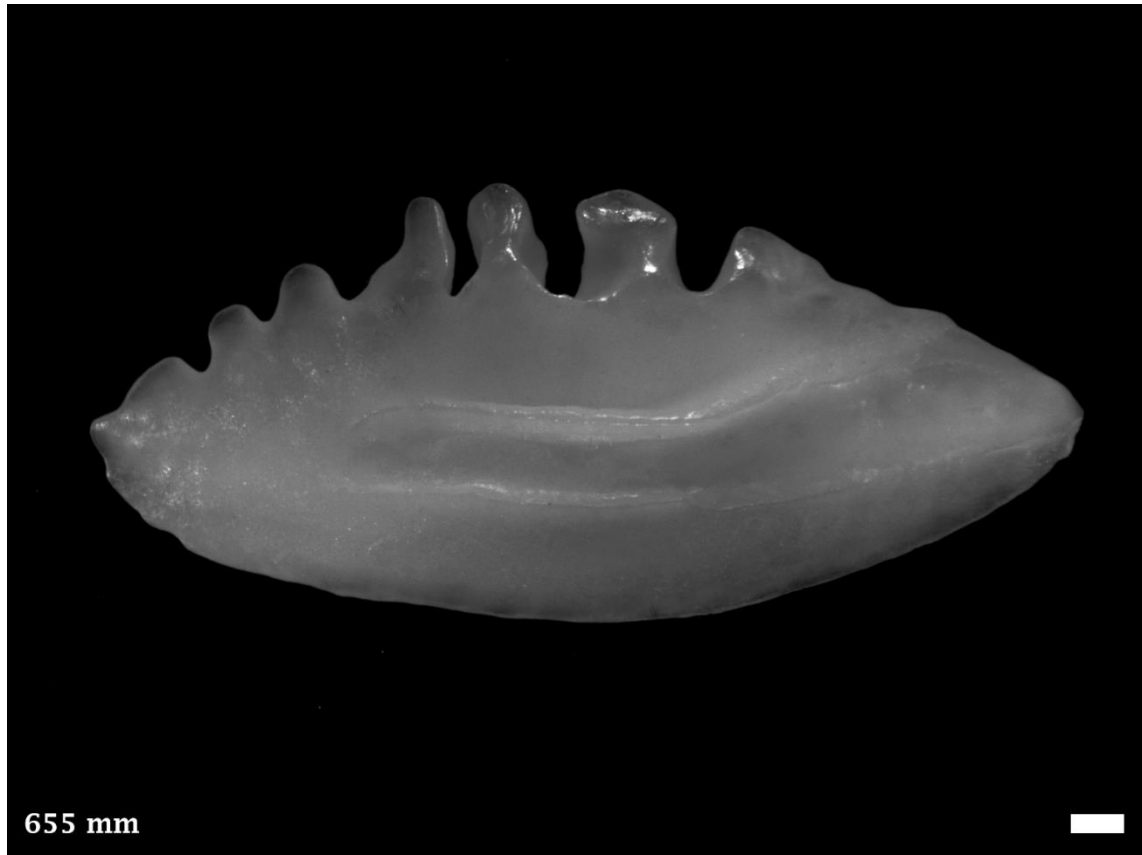


Distribution and Length: Coastal waters from Fremantle, WA south around Albany, WA. 470 mm TL.

No image.

5.72 *Platycephalus conatus*, Deepwater Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

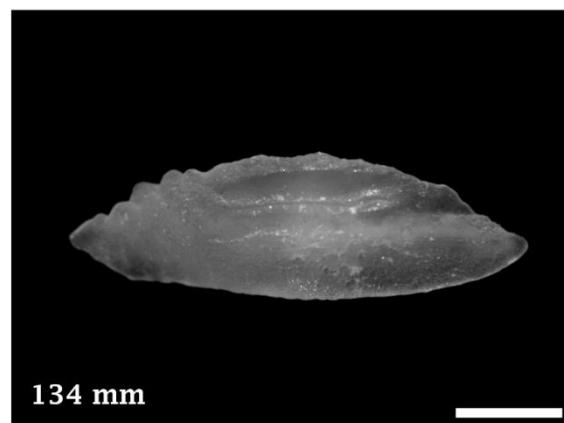
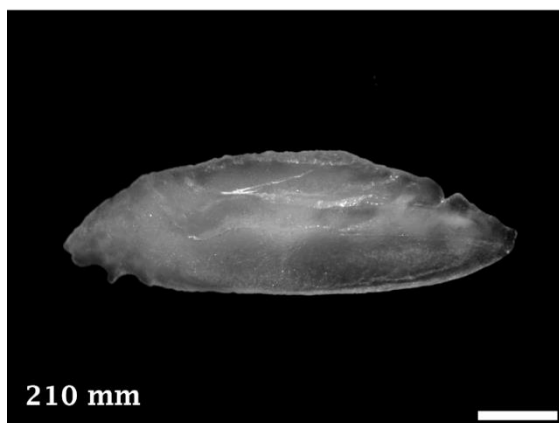
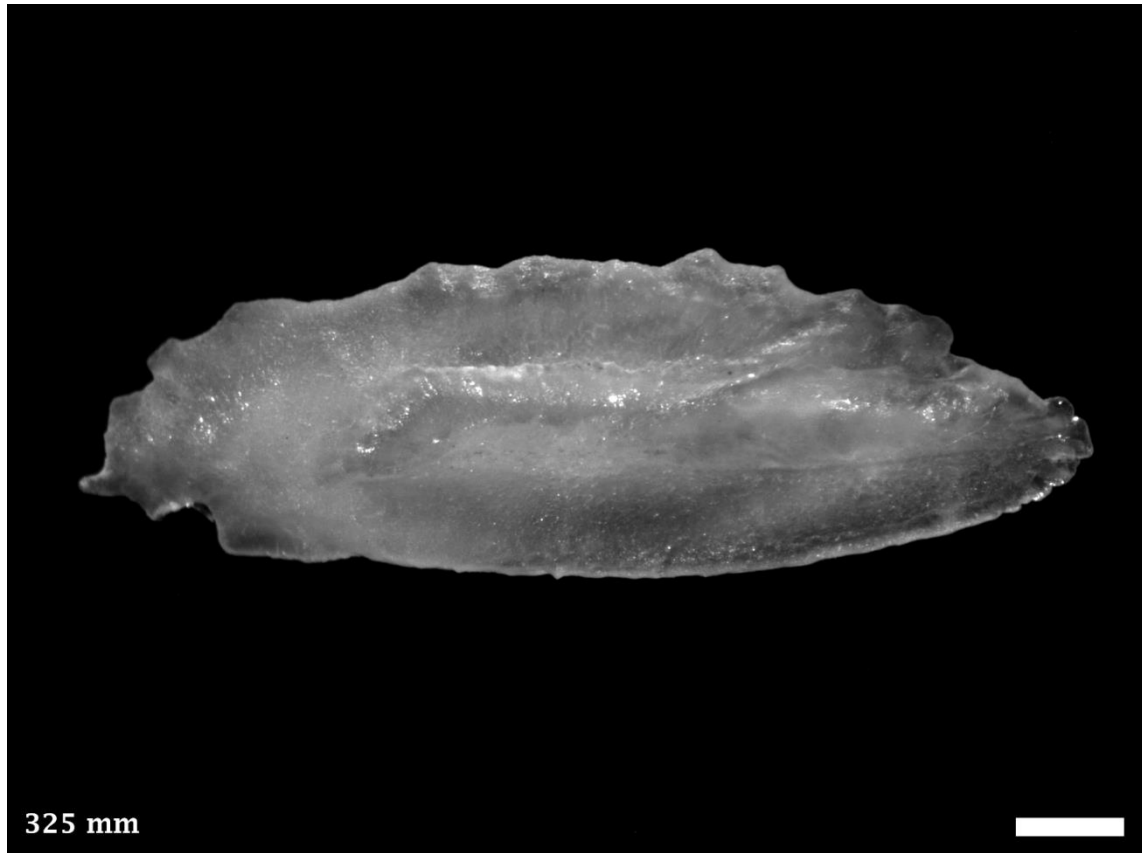


Distribution and Length: Deep offshore waters from Geraldton, WA south around Port Phillip Bay, Victoria. 700 mm SL.



5.73 *Platycephalus endrachtensis*, Northern Sand Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

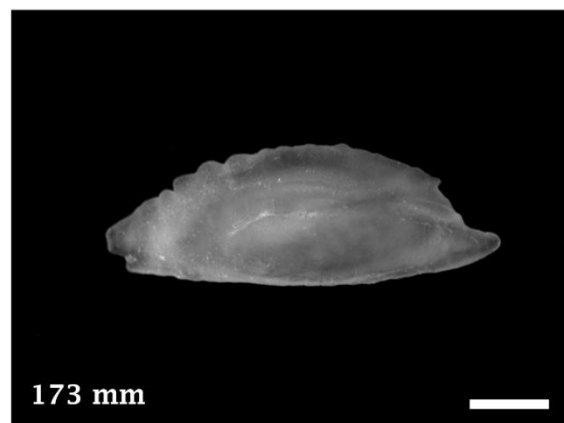
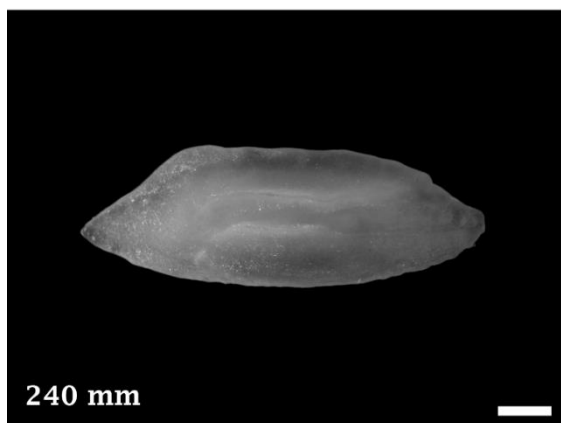
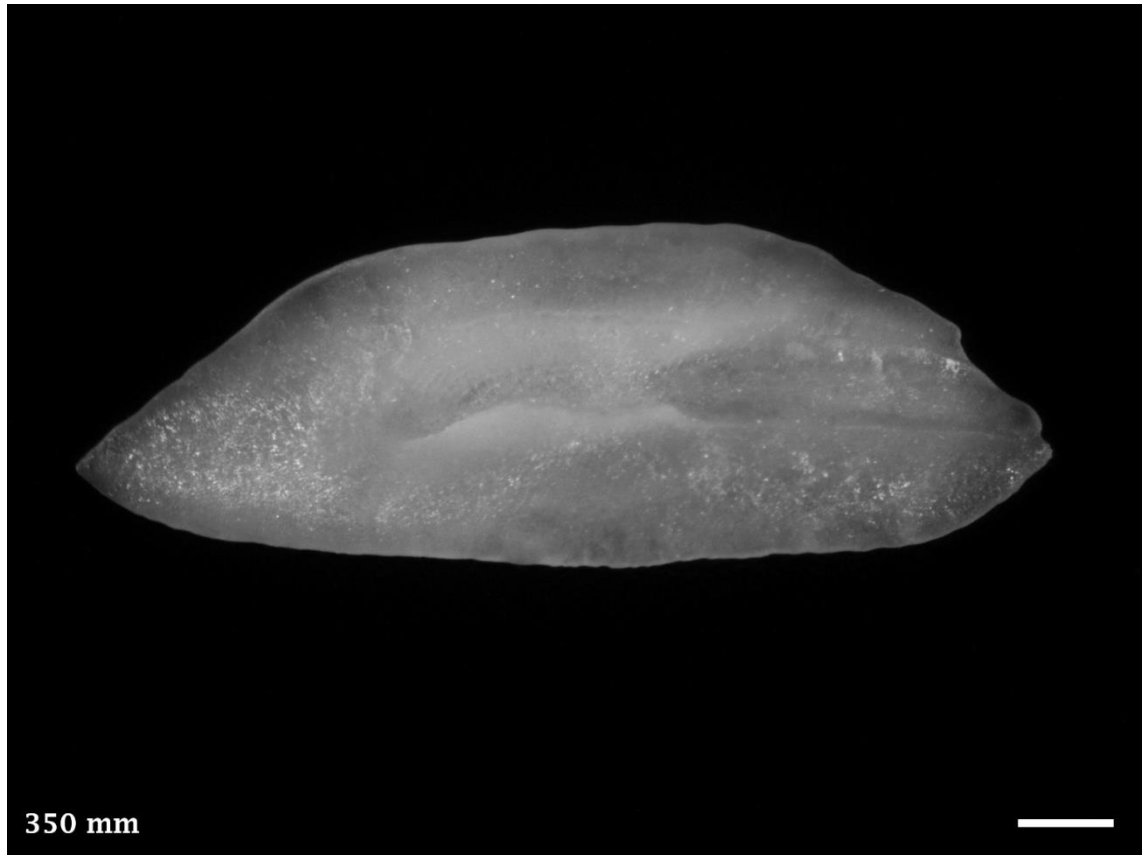


Distribution and Length: Estuarine and coastal waters from Kalbarri, WA north around to northern NSW. 450 mm TL.



5.74 *Platycephalus grandispinis*, Longspine Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

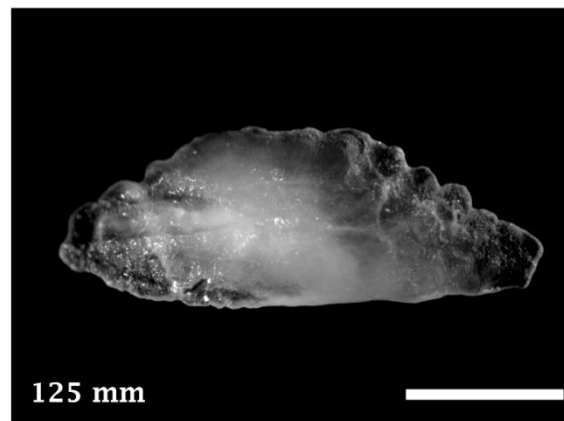
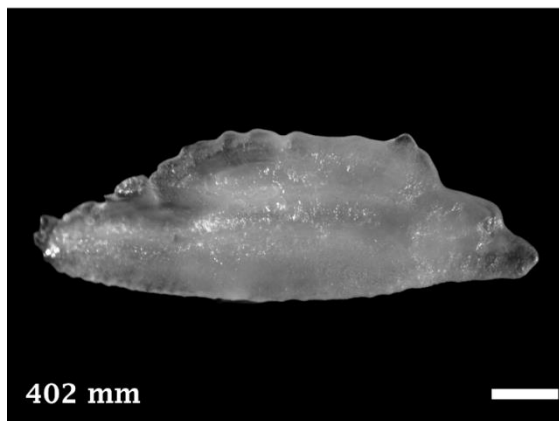
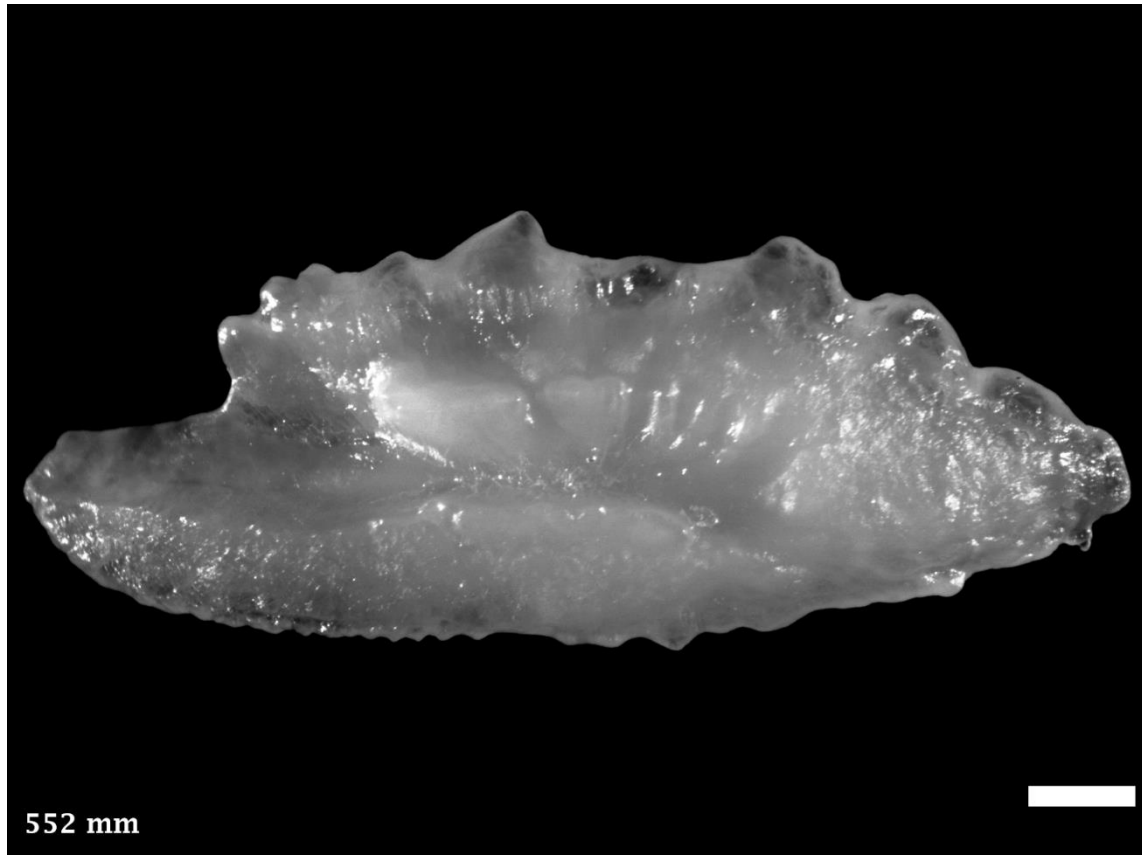


Distribution and Length: Coastal and offshore waters from Carnarvon, WA south around to southern Queensland. 350 mm TL.



5.75 *Platycephalus laevigatus*, Rock Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

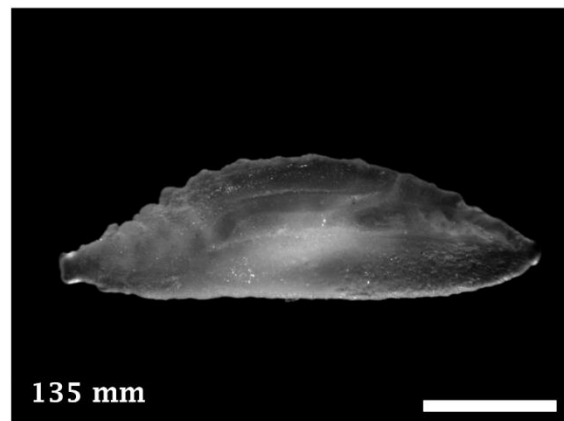
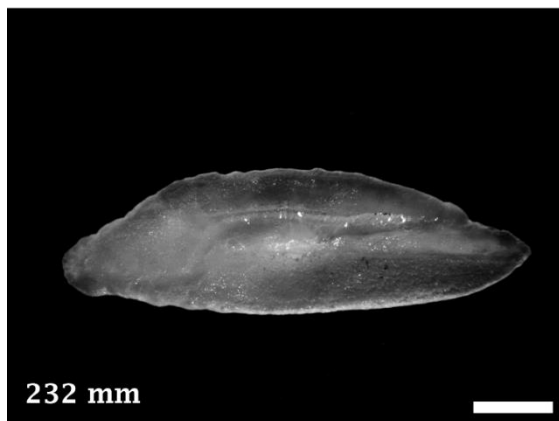
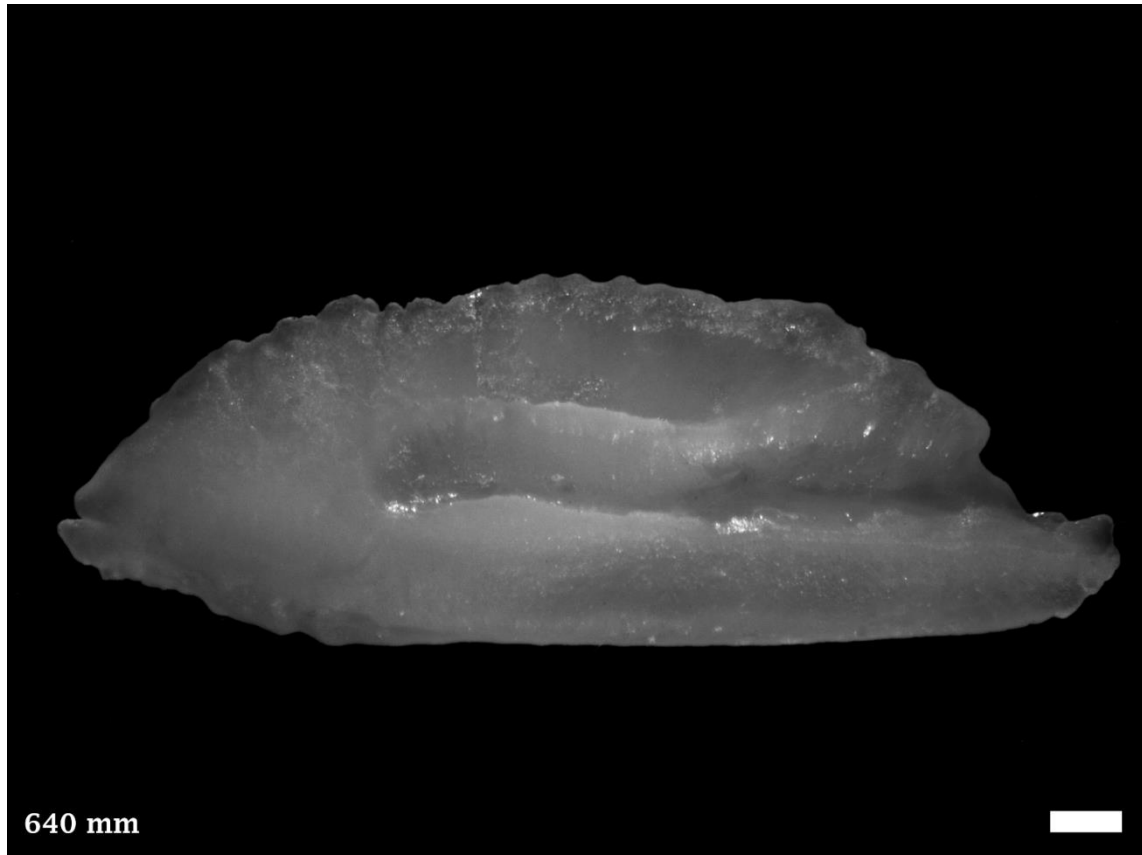


Distribution and Length: Coastal waters from Perth, WA south around to Nowra, NSW, including Tasmania. Note: Right otoliths. 810 mm TL.



5.76 *Platycephalus speculator*, Southern Bluespotted Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

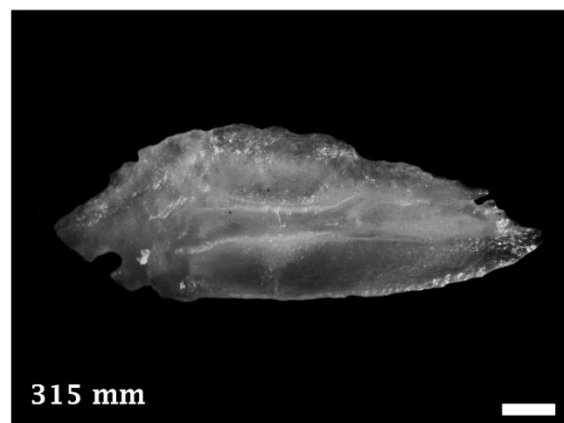
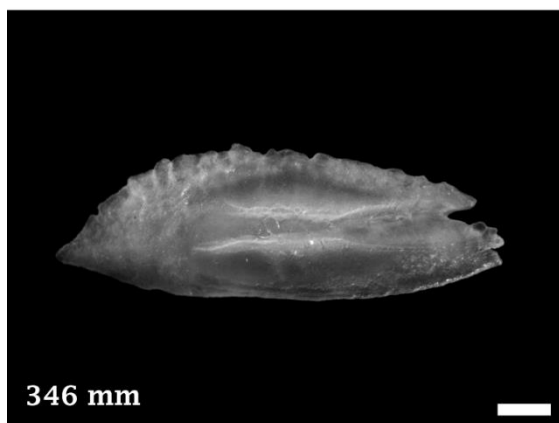
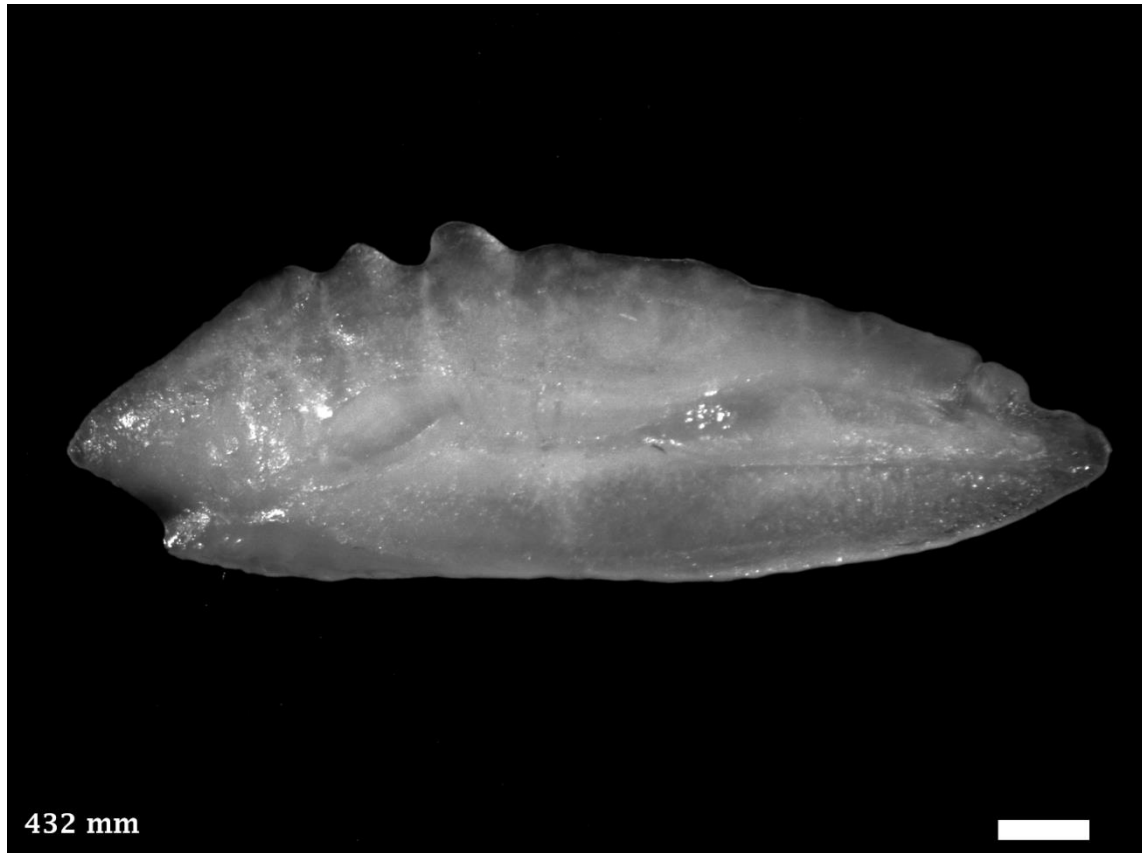


Distribution and Length: Coastal waters from Shark Bay, WA south around to Victoria and northern Tasmania. 900 mm SL.



5.77 *Platycephalus westraliae*, Yellowtail Flathead

SCORPAENIFORMES PLATYCEPHALIDAE (Flatheads)

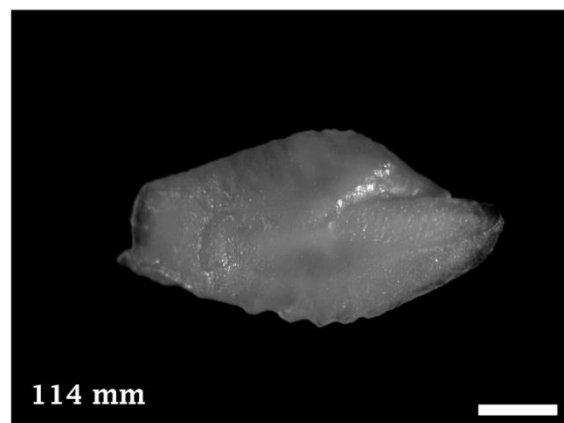
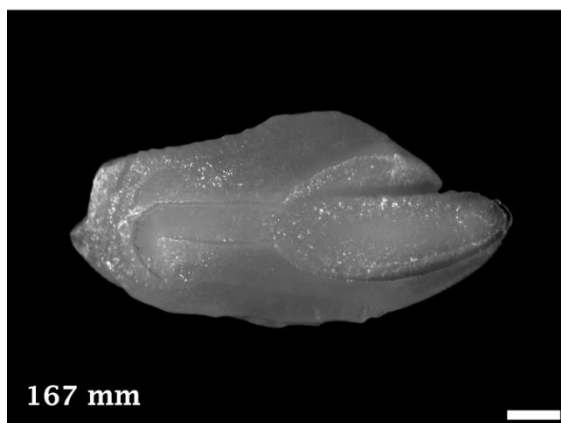
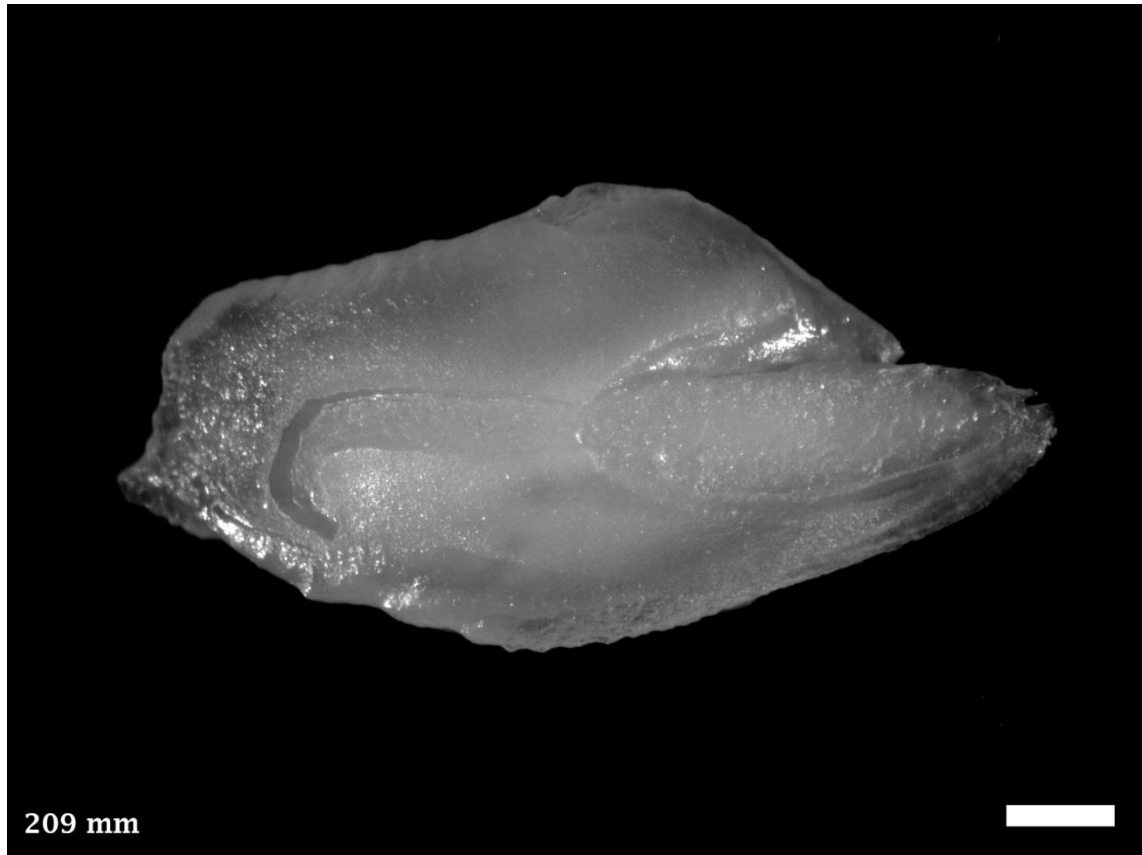


Distribution and Length: Estuarine and coastal waters from Perth, WA north around to Port Hacking, NSW. 1000 mm TL.



5.78 *Hypopterus macropterus*, Spikey Bass

PERCIFORMES LATIDAE (Giant Perches)

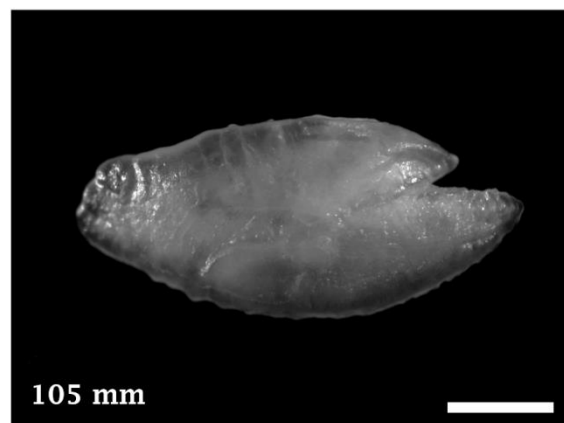
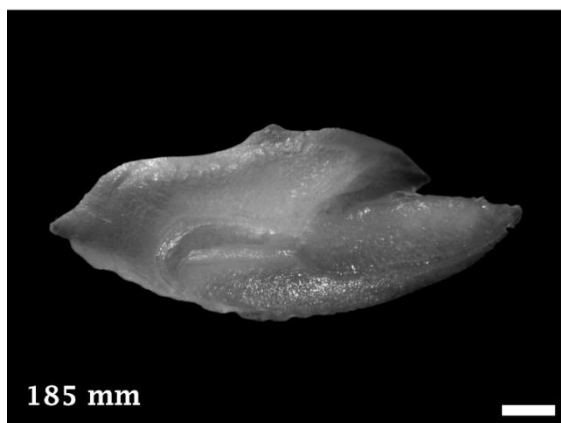
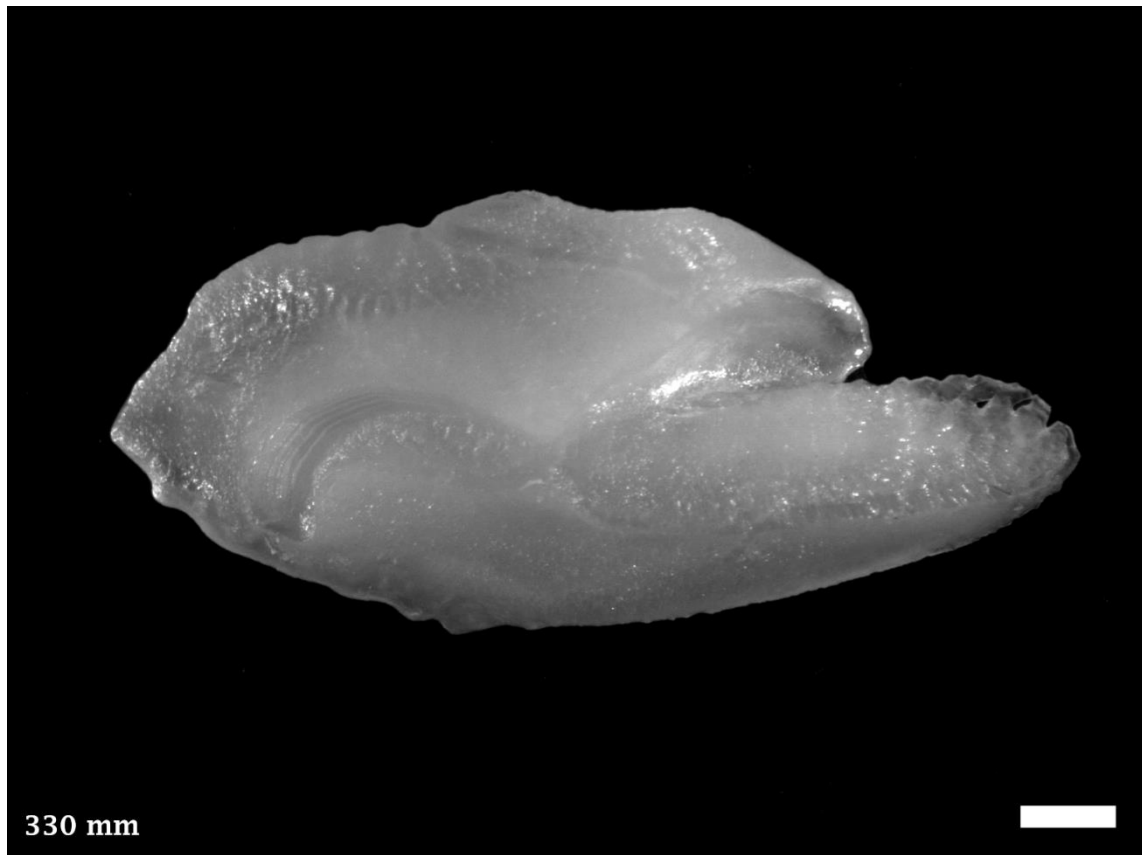


Distribution and Length: Coastal waters from Onslow, WA south to Jurien Bay, WA (Allan 1997). 210 mm TL.



5.79 *Psammoperca datnioides*, Sand Bass

PERCIFORMES LATIDAE (Giant Perches)

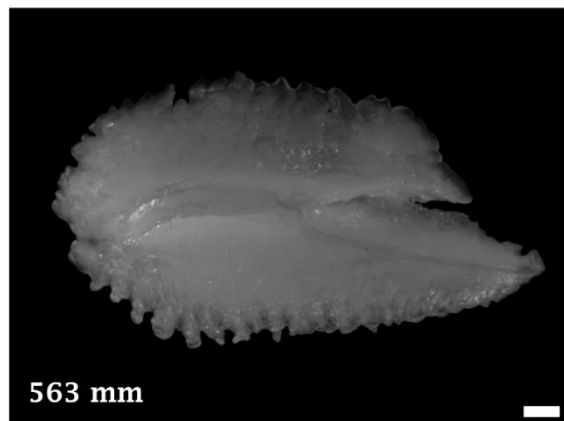
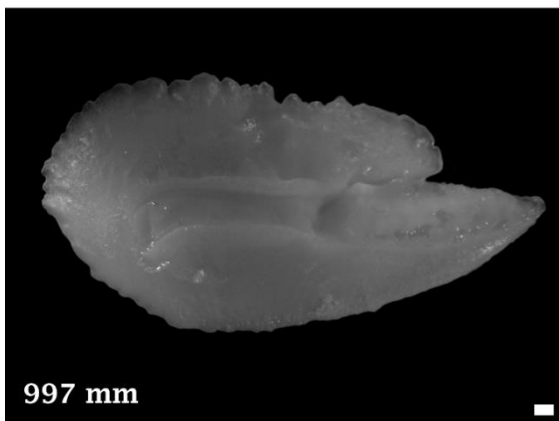
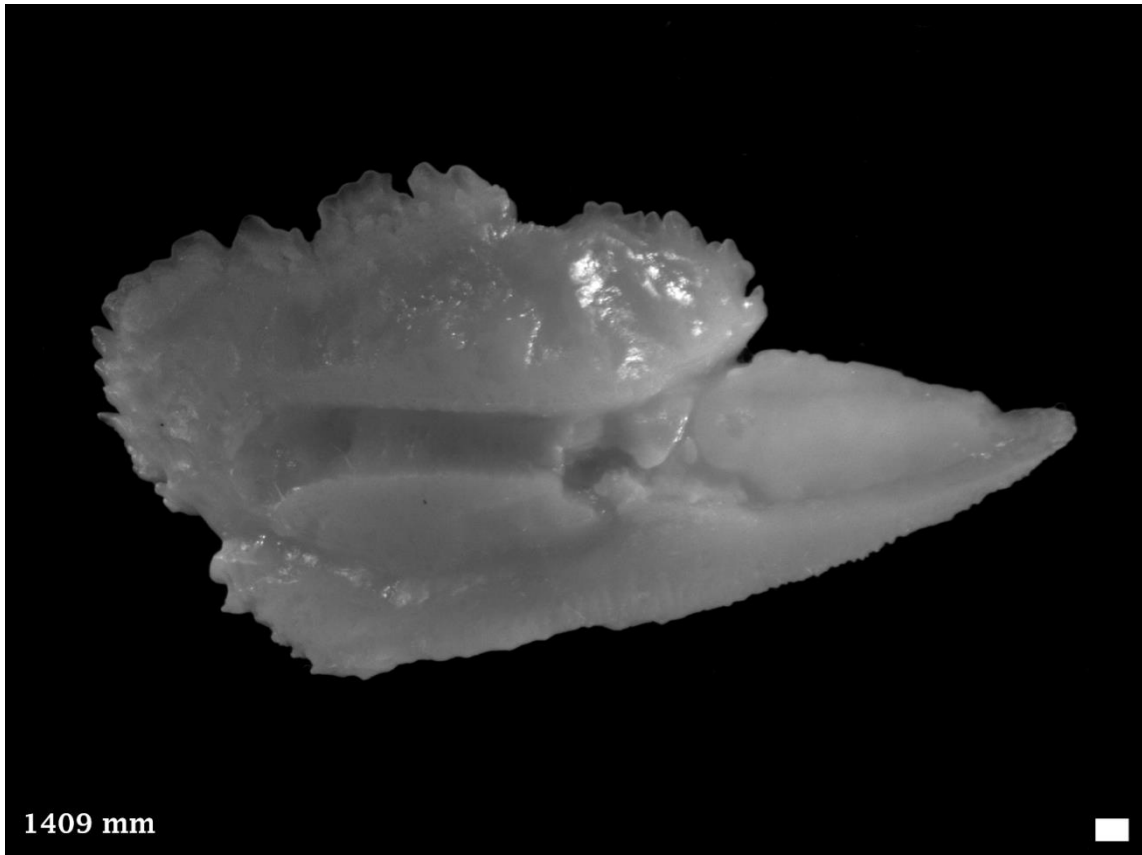


Distribution and Length: Coastal waters from Geographe Bay, WA north around to Morton Bay, Qld. 470 mm TL.



5.80 *Polyprion americanus*, Bass Groper

PERCIFORMES POLYPRIONIDAE (Wreakfishes)

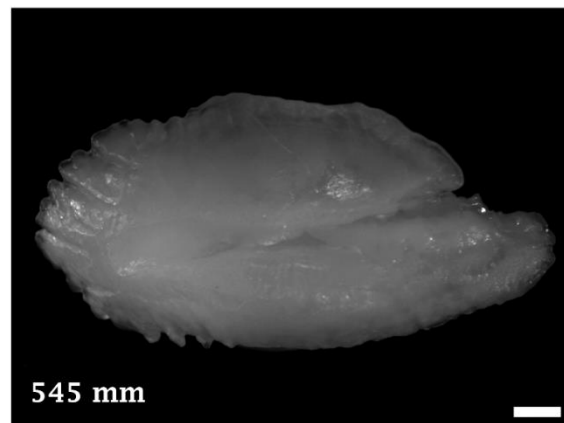
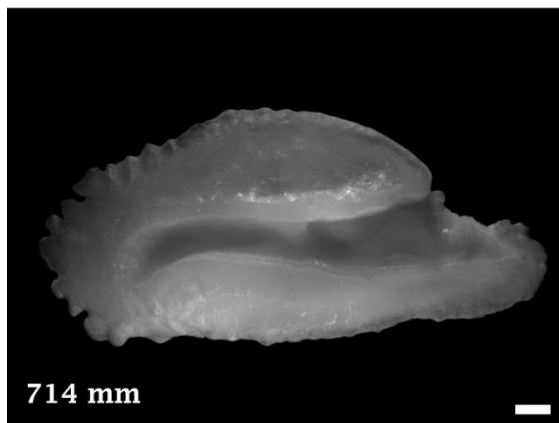
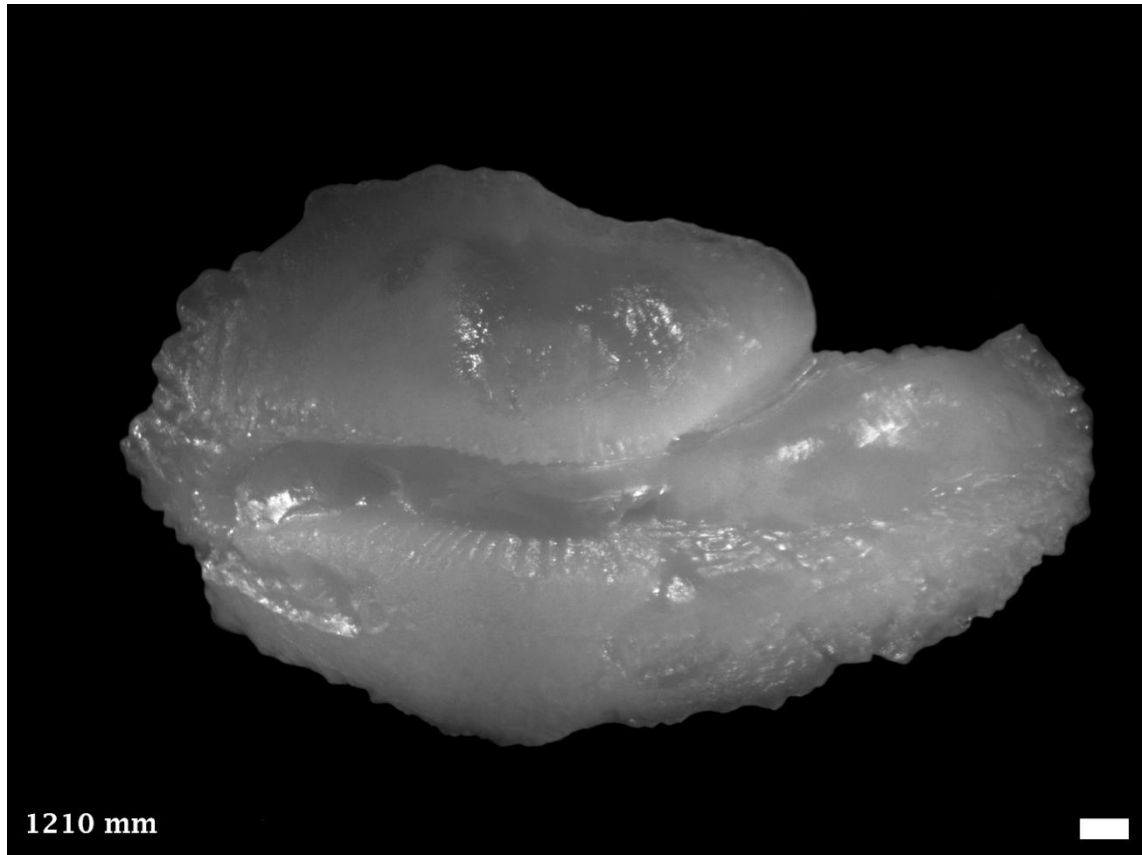


Distribution and Length: Offshore waters from southern WA south around to southern Queensland, including Tasmania. 2000 mm SL.



5.81 *Polyprion oxygeneios*, Hapuku

PERCIFORMES POLYPRIONIDAE (Wreakfishes)

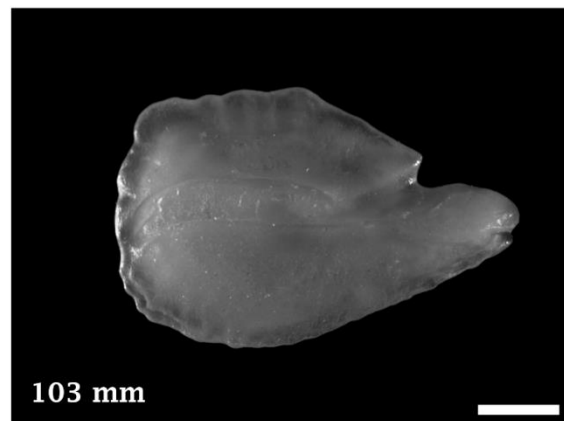
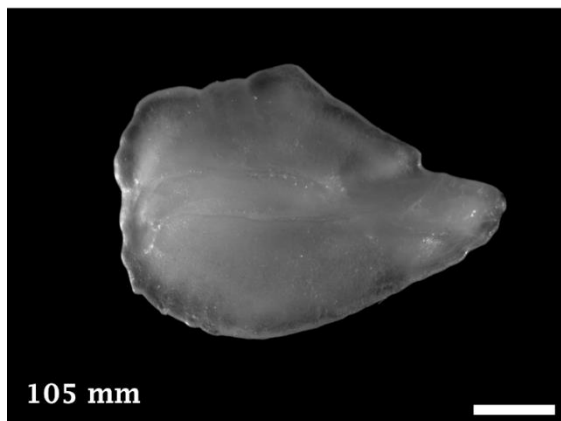
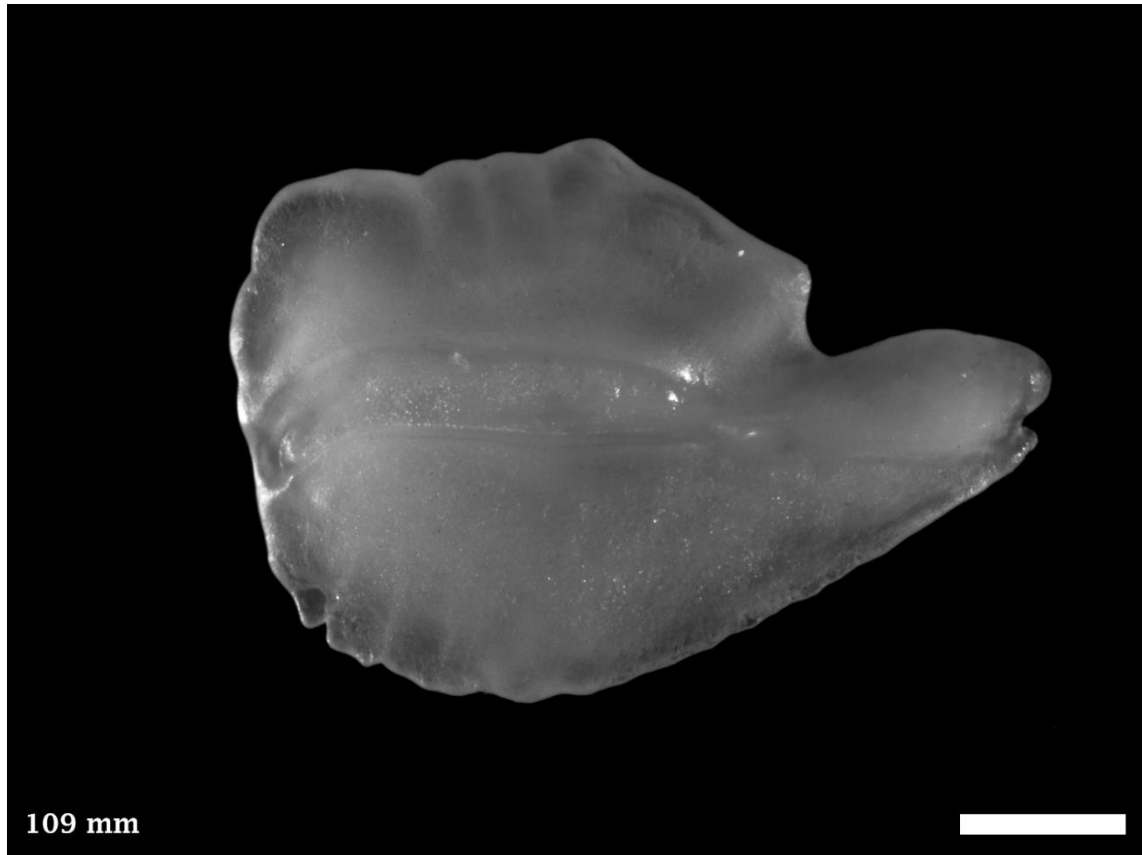


Distribution and Length: Deep offshore waters from Rottnest Island, WA south around to Sydney, NSW, including Tasmania. 1800 mm TL.



5.82 *Verilus anomalus*, Threespine Cardinalfish

PERCIFORMES ACROPOMATIDAE (Ocean Basses)

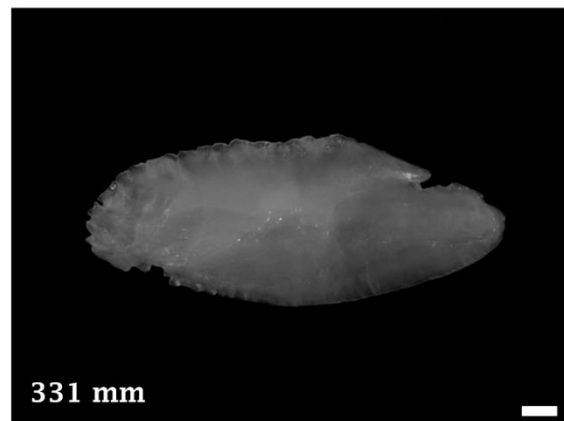
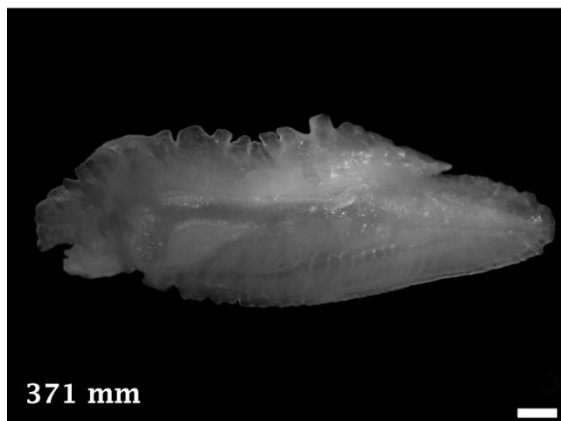
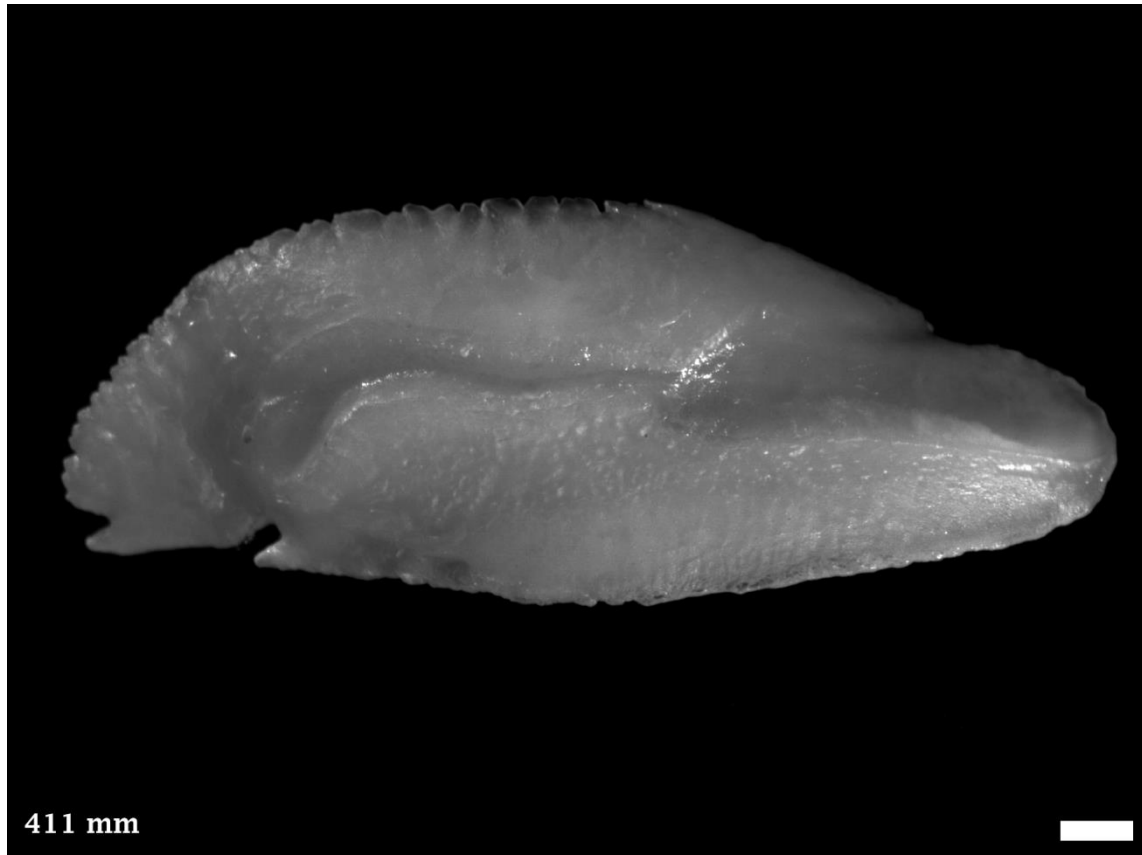


Distribution and Length: Estuarine, coastal and deep offshore waters from Onslow, WA south around to southern Queensland, including Tasmania. 150 mm TL.



5.83 *Acanthistius serratus*, Western Wirrah

PERCIFORMES SERRANIDAE (Rockcods)

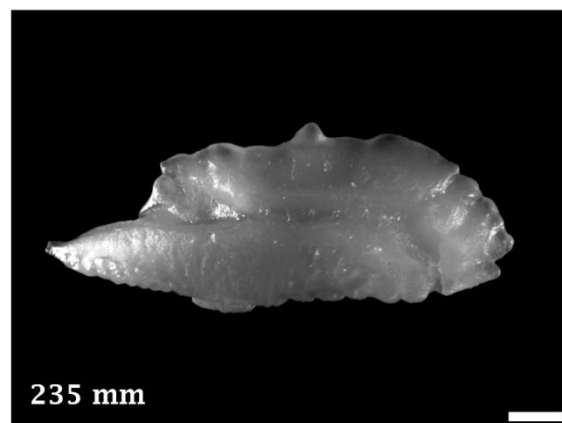
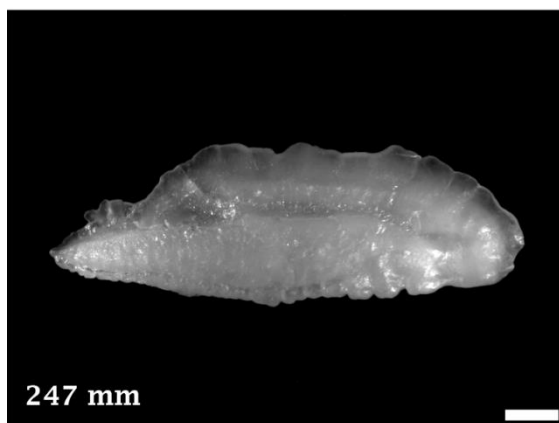
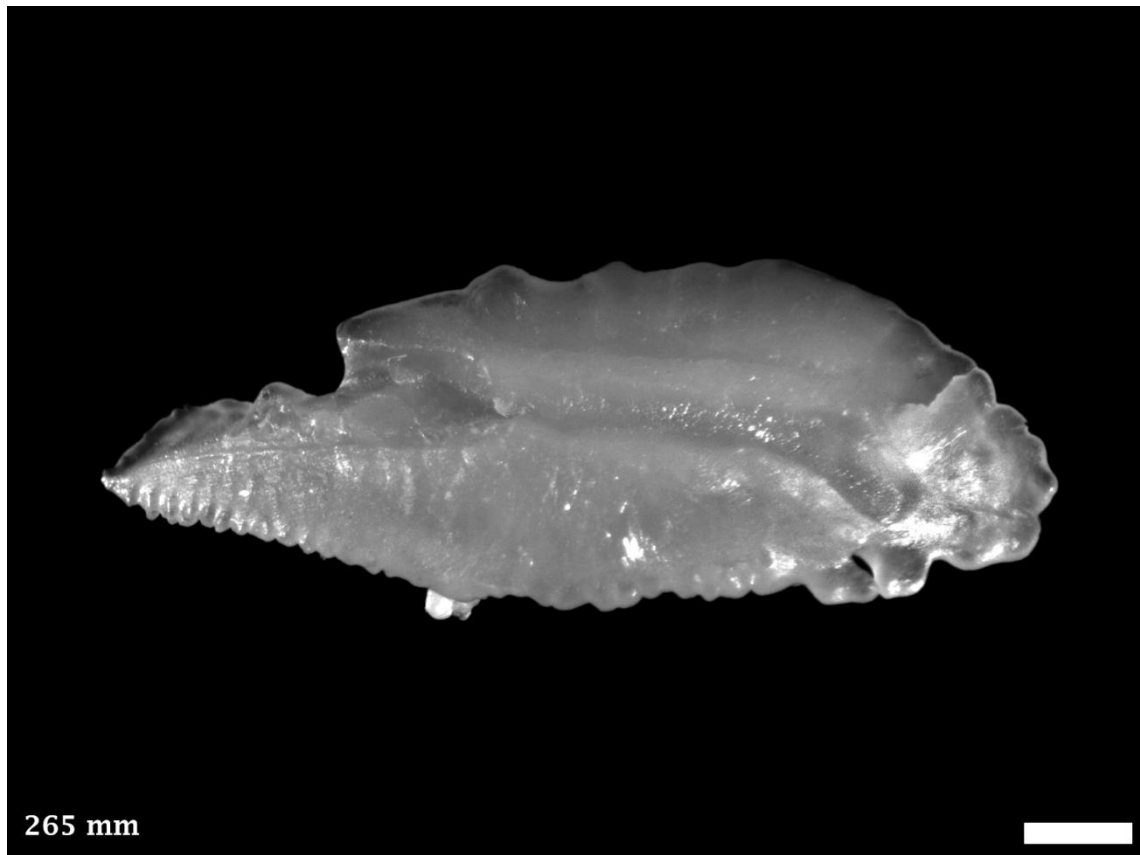


Distribution and Length: Coastal reefs from Shark Bay, WA south to Ceduna, SA. 500 mm TL.



5.84 *Caesioperca rasor*, Barber Perch

PERCIFORMES SERRANIDAE (Rockcods)

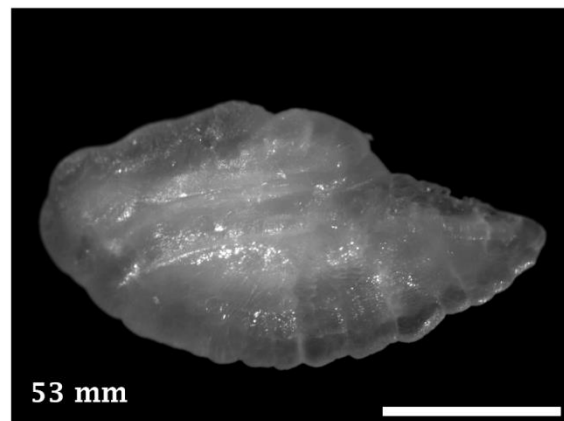
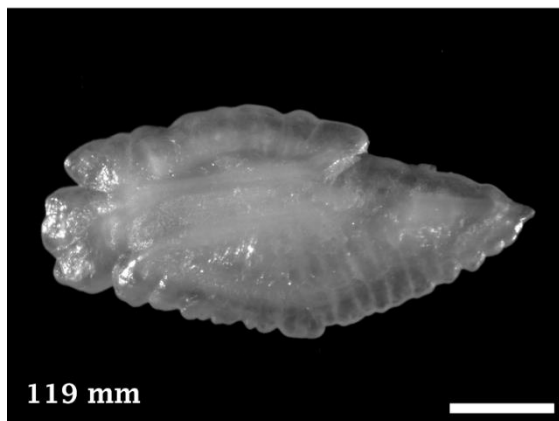
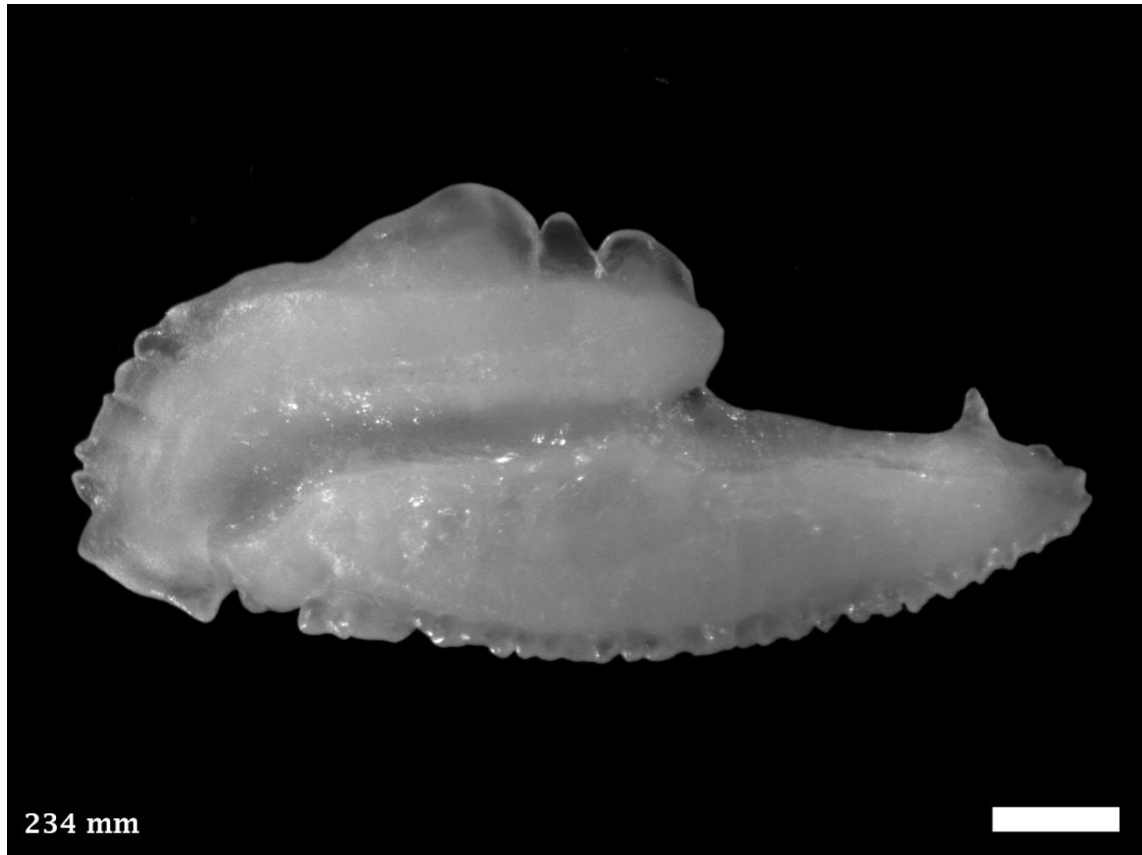


Distribution and Length: Coastal waters from Augusta, WA east to Wilsons Promontory, Vic, including Tasmania. Note: Right otoliths. 250 mm SL.



5.85 *Caesioperca* sp., Redlined Seaperch

PERCIFORMES SERRANIDAE (Rockcods)

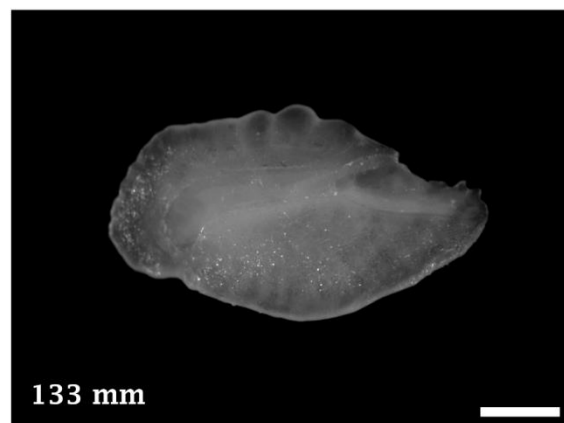
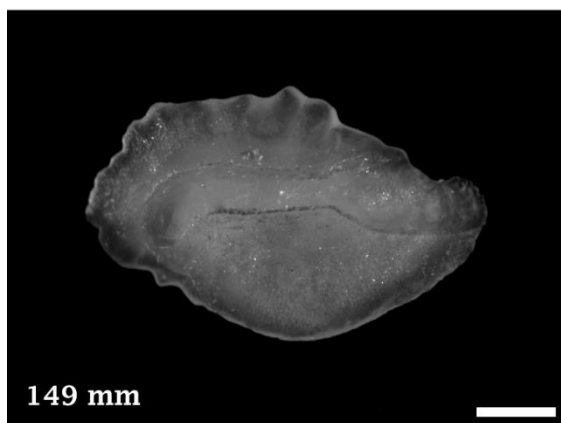
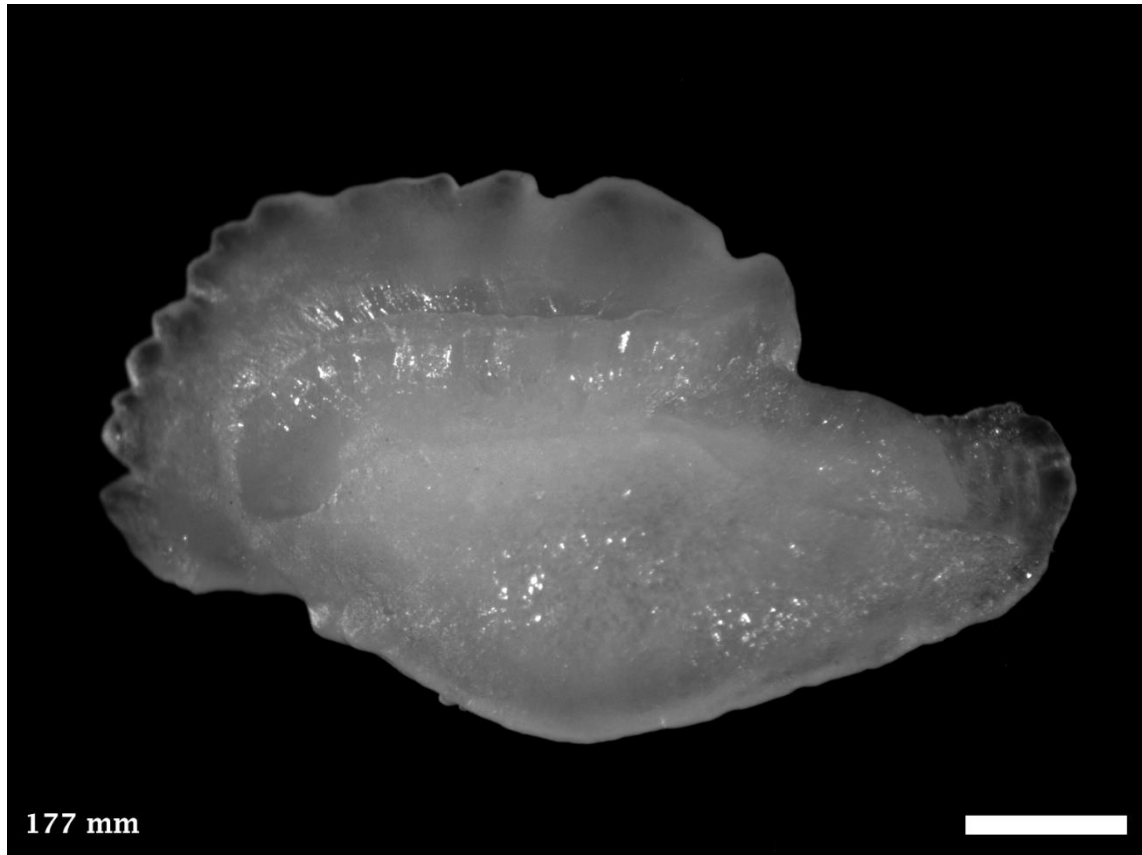


Distribution and Length: Coastal reefs from Rottnest Island, WA south to Albany WA. 234 mm TL.



5.86 *Caesiocorpiis theagenes*, Blowhole Perch

PERCIFORMES SERRANIDAE (Rockcods)

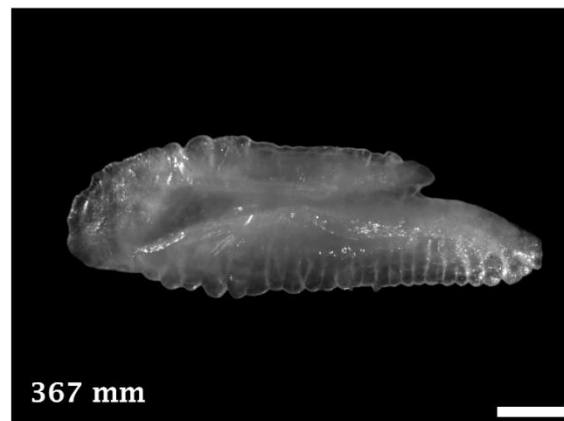
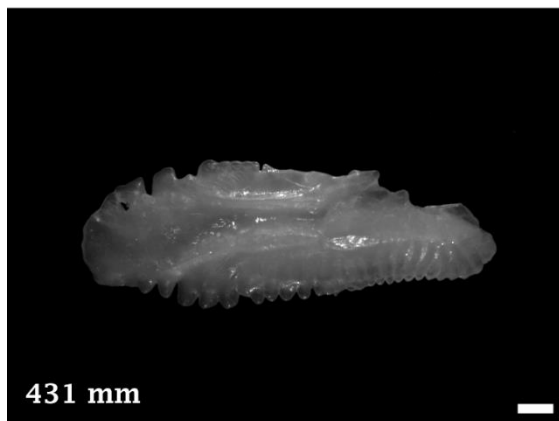
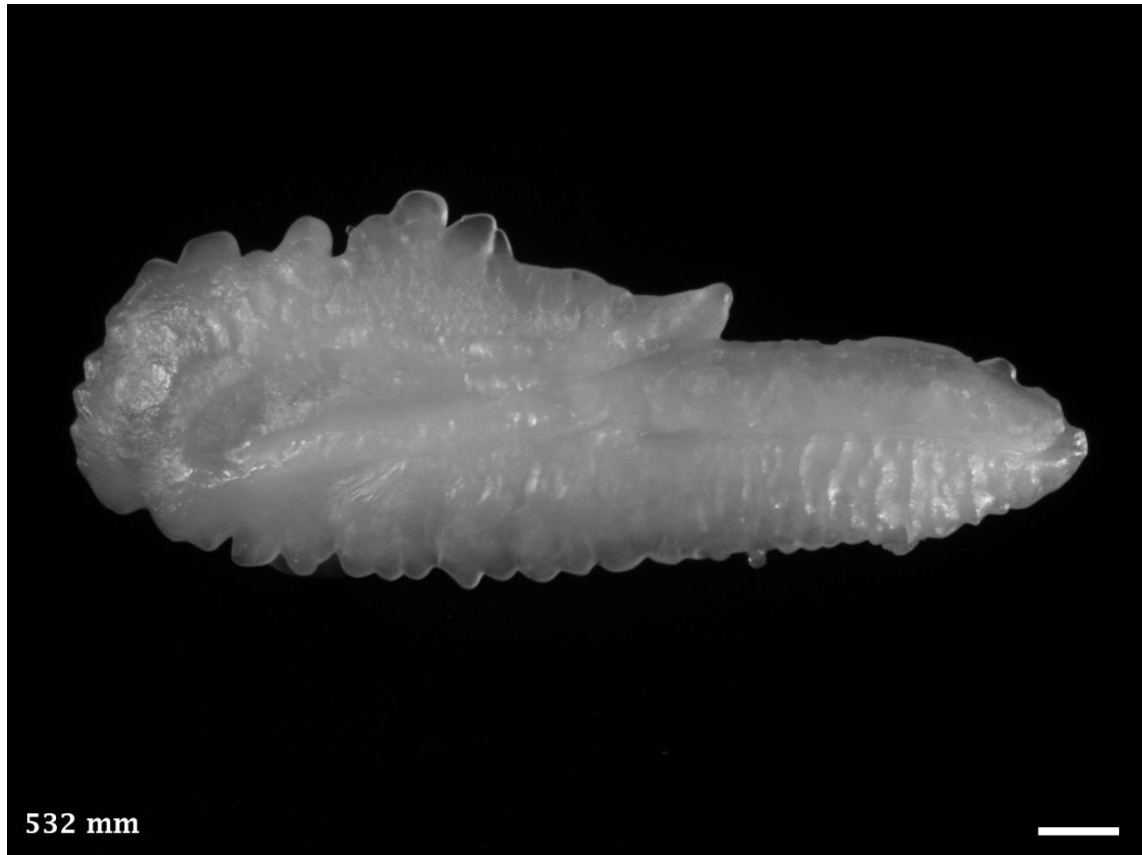


Distribution and Length: Coastal and estuarine waters from Shark Bay, WA south to Albany, WA. 180 mm TL.



5.87 *Epinephelides armatus*, Breaksea Cod

PERCIFORMES SERRANIDAE (Rockcods)

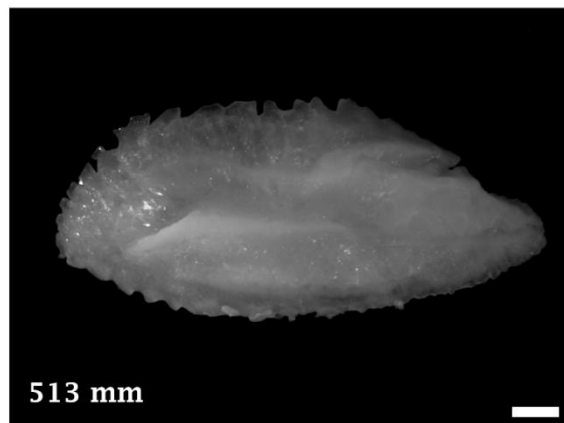
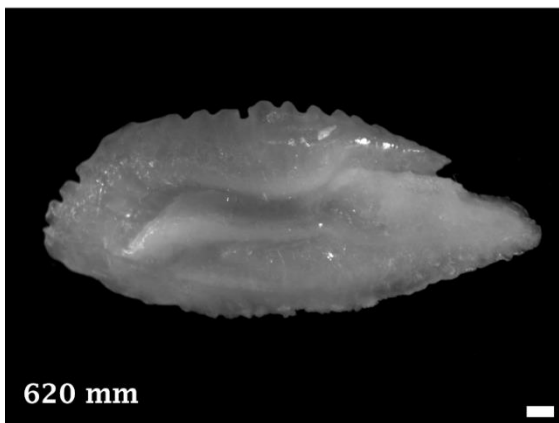
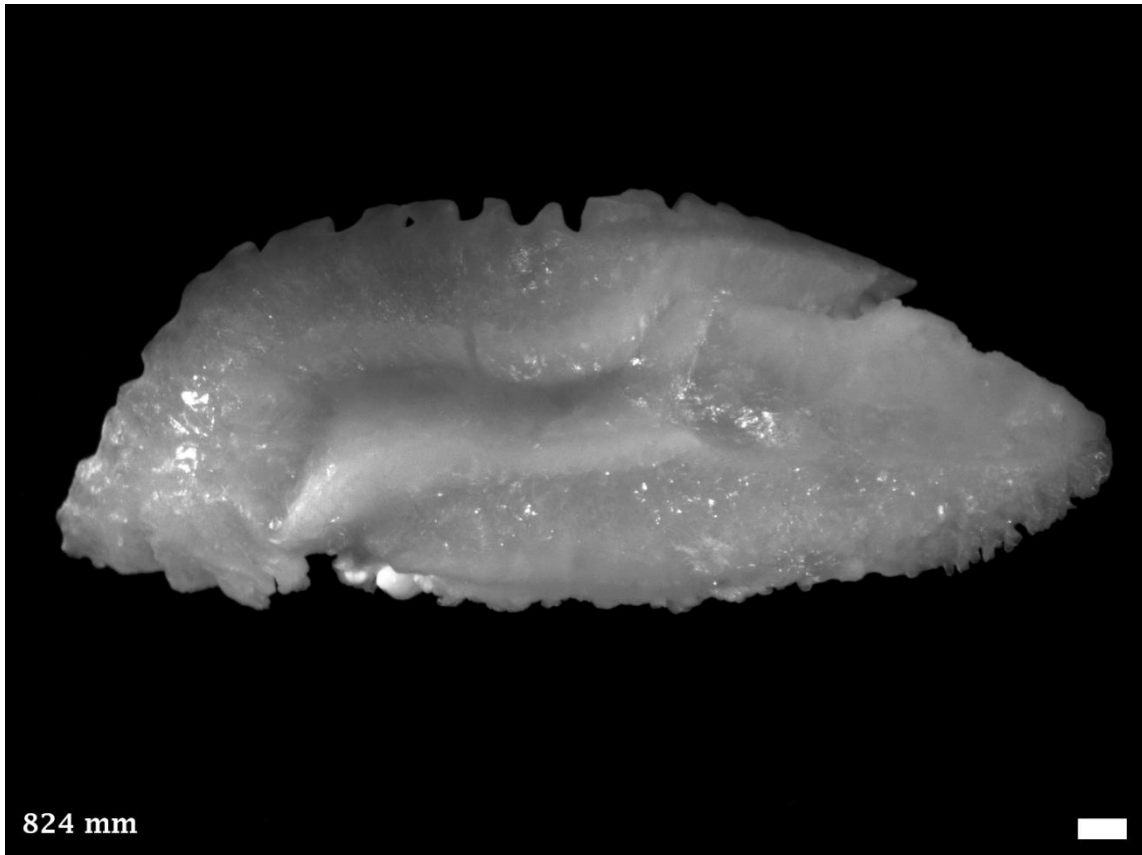


Distribution and Length: Coastal waters from Shark Bay, WA south to Recherche Archipelago, WA. 550 mm TL.



5.88 *Epinephelus coioides*, Goldspotted Rockcod

PERCIFORMES SERRANIDAE (Rockcods)

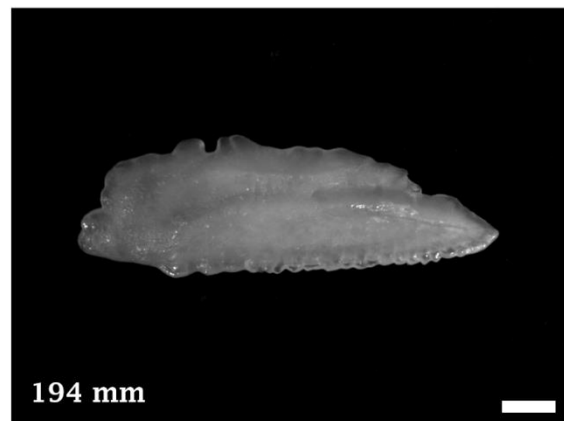
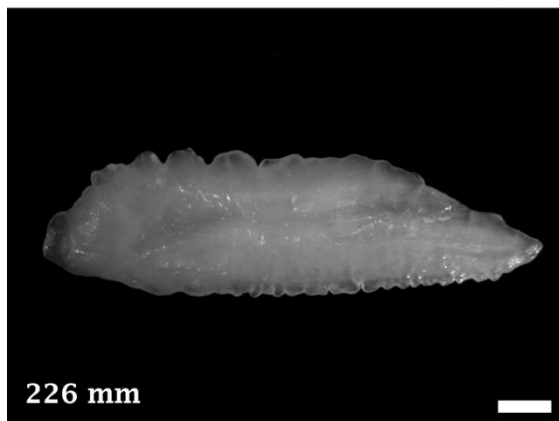
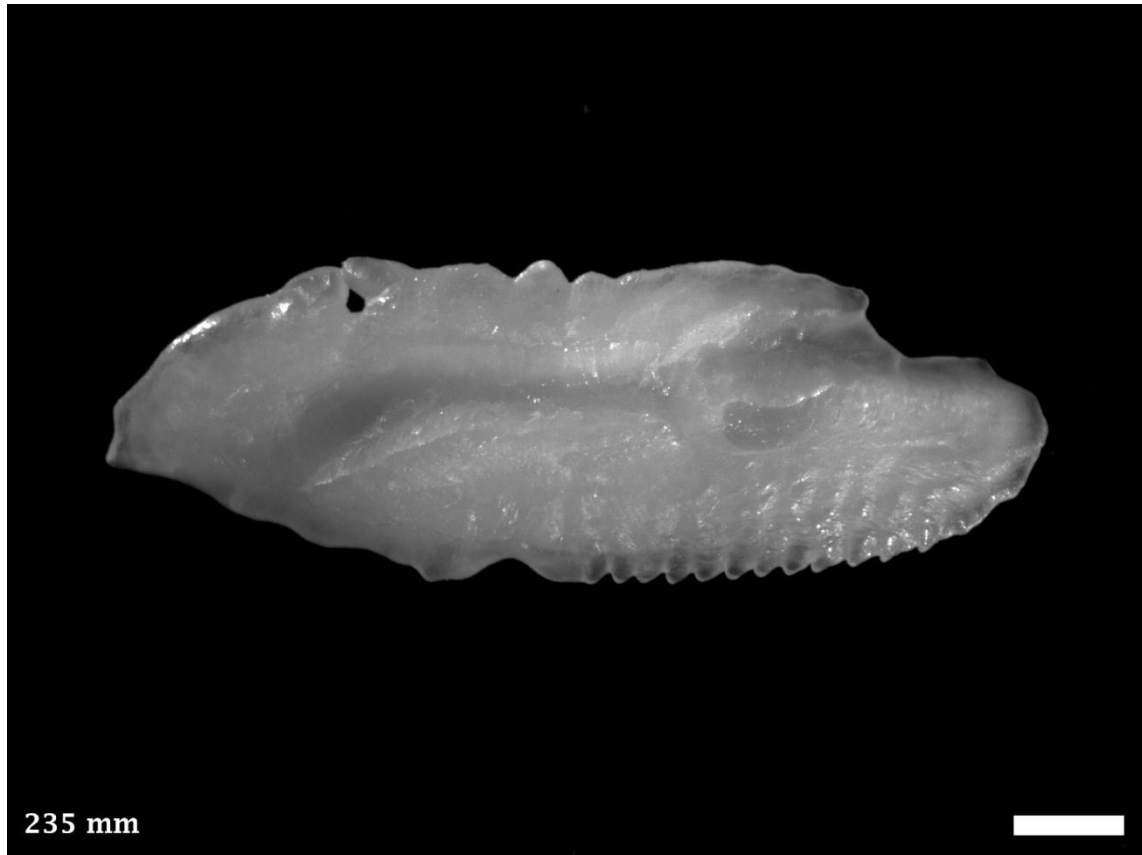


Distribution and Length: Estuarine and coastal waters from Rottnest Island, WA north around to Seal Rocks, NSW. 1780 mm TL.



5.89 *Hypoplectrodes nigroruber*, Banded Seaperch

PERCIFORMES SERRANIDAE (Rockcods)

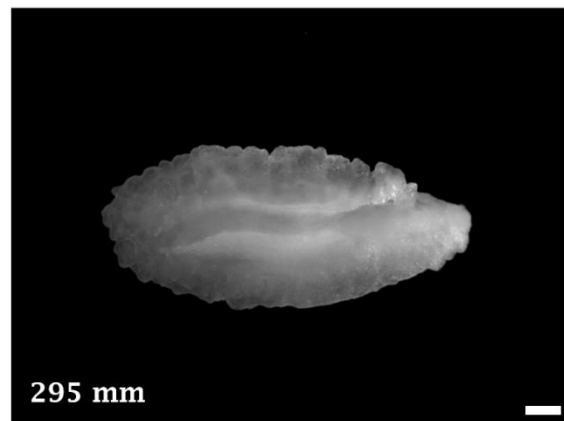
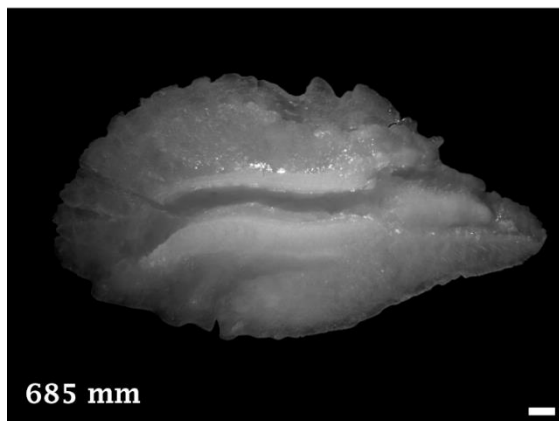
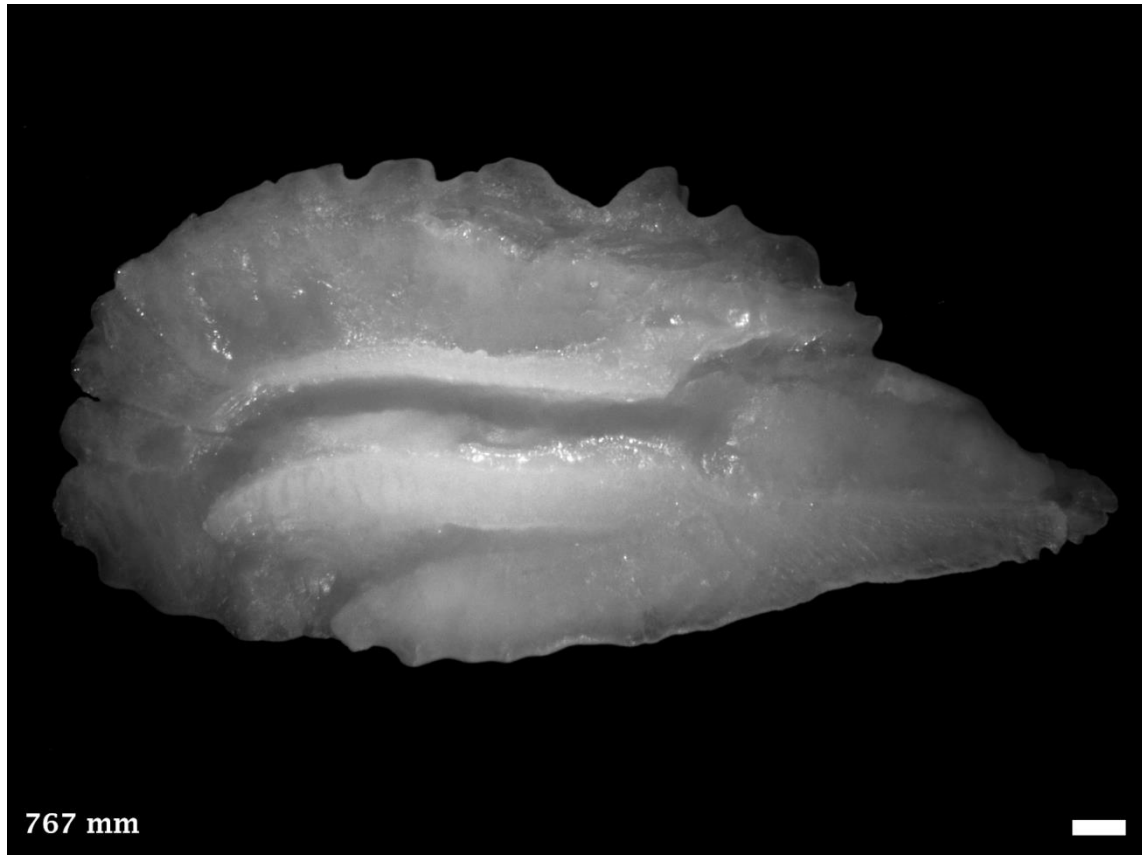


Distribution and Length: Rocky reefs from Kalbarri, WA south around to Tuggerah Lake, NSW, including northern Tasmania. 300 mm SL.



5.90 *Hyporthodus* c.f. *octofasciatus*, like Eightbar Grouper

PERCIFORMES SERRANIDAE (Rockcods)

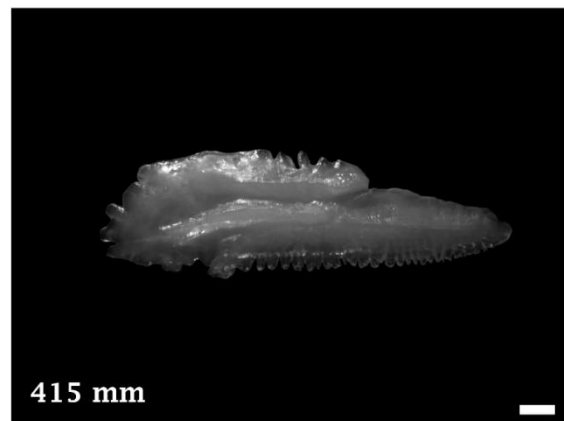
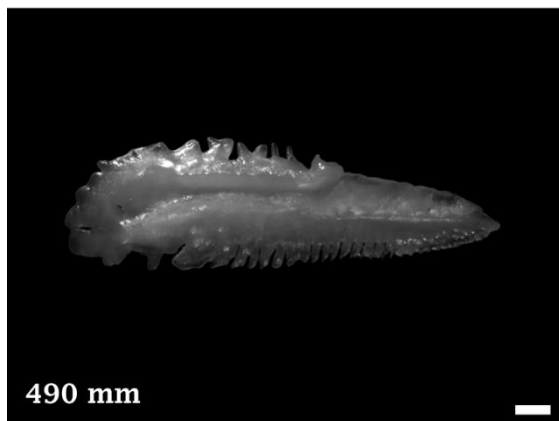
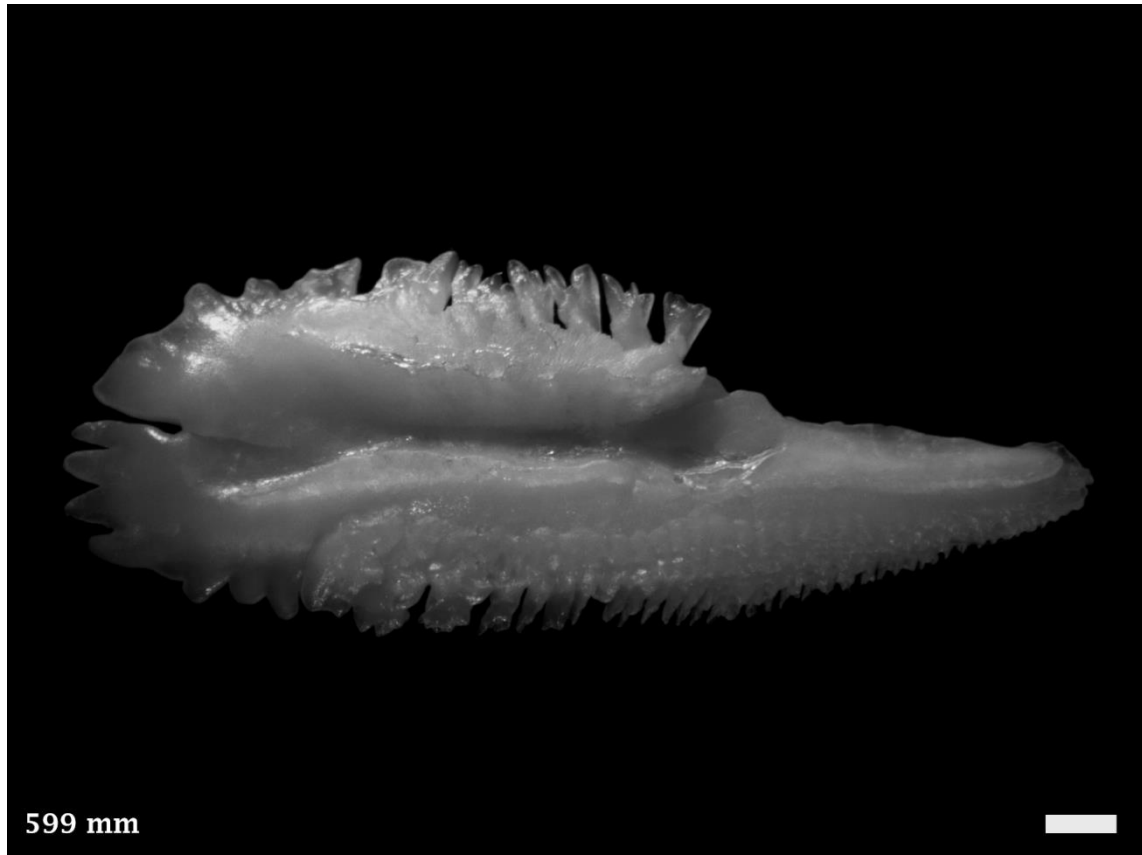


Distribution and Length: Deep offshore waters from northern Western Australia south to Recherche Archipelago, WA (Wakefield *et al.* 2013). ~1500 mm TL.



5.91 *Othos dentex*, Harlequin Fish

PERCIFORMES SERRANIDAE (Rockcods)

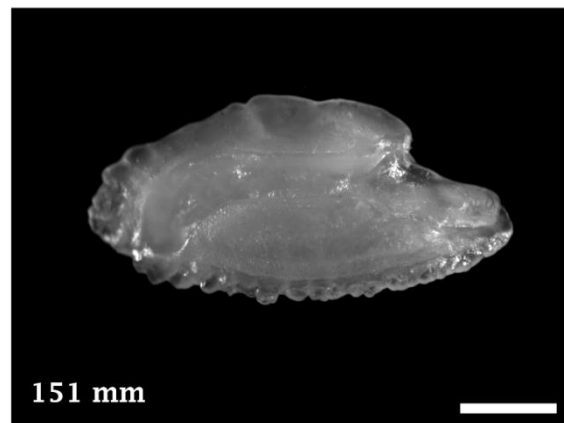
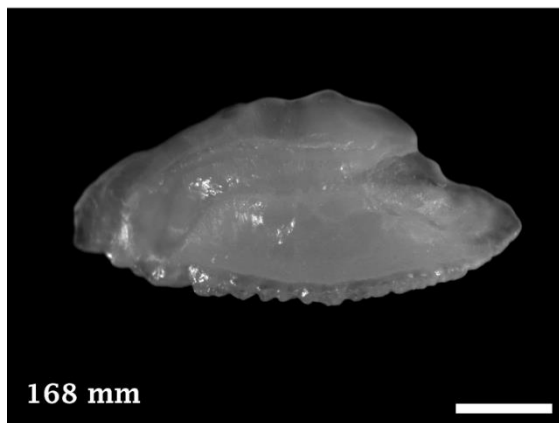
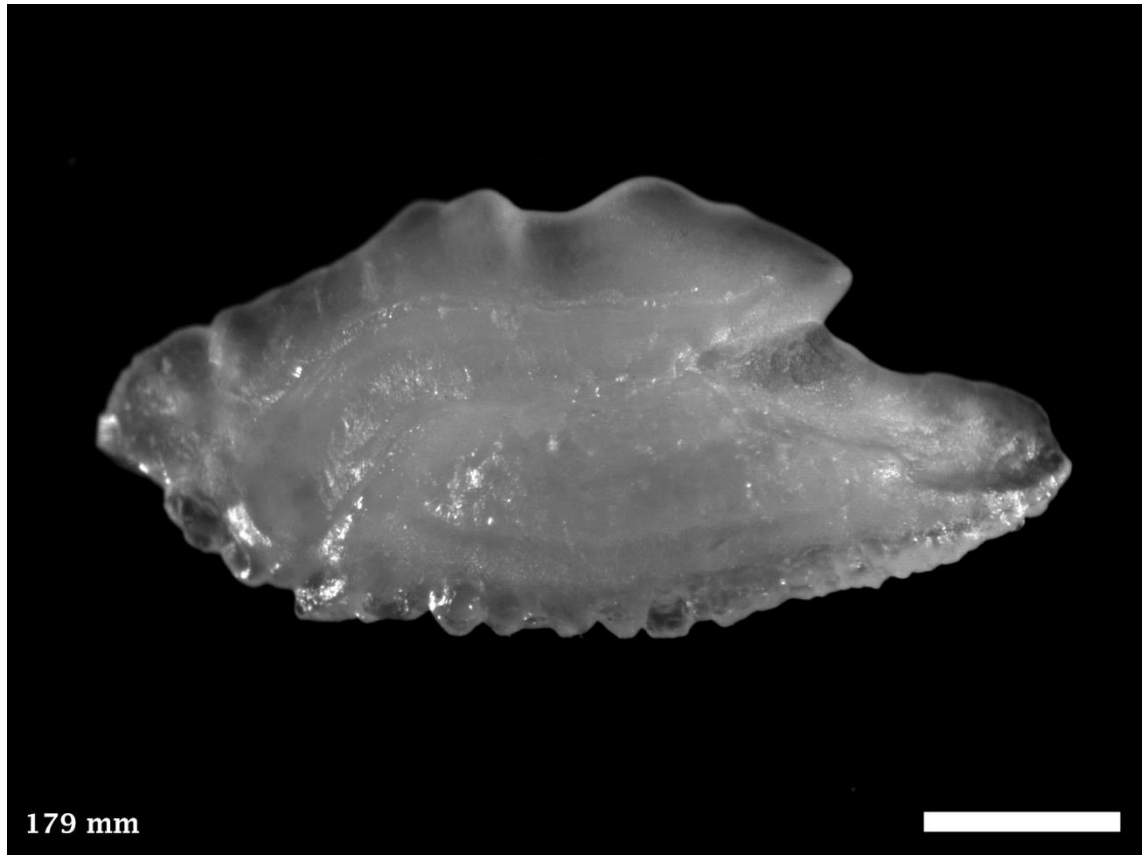


Distribution and Length: Coastal waters from Jurien Bay, WA south around to Victoria. 750 mm SL.

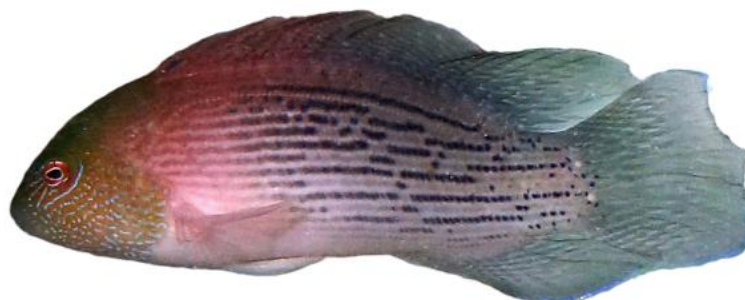


5.92 *Labracinus lineatus*, Lined Dottyback

PERCIFORMES PSEUDOCROMIAE (Dottybacks)

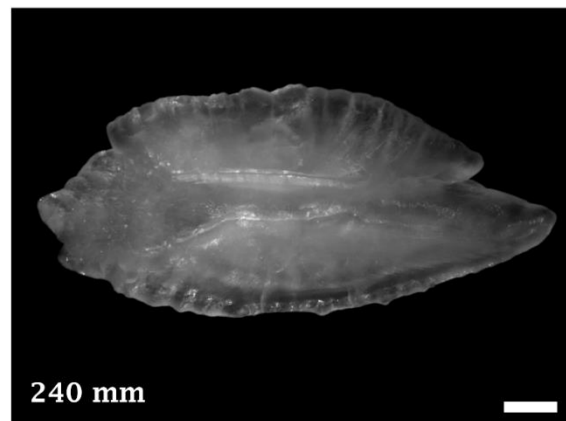
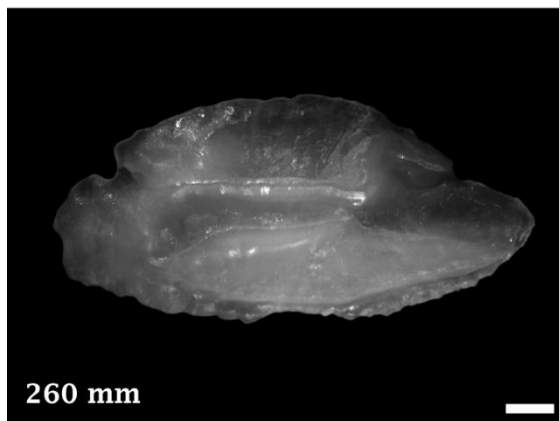
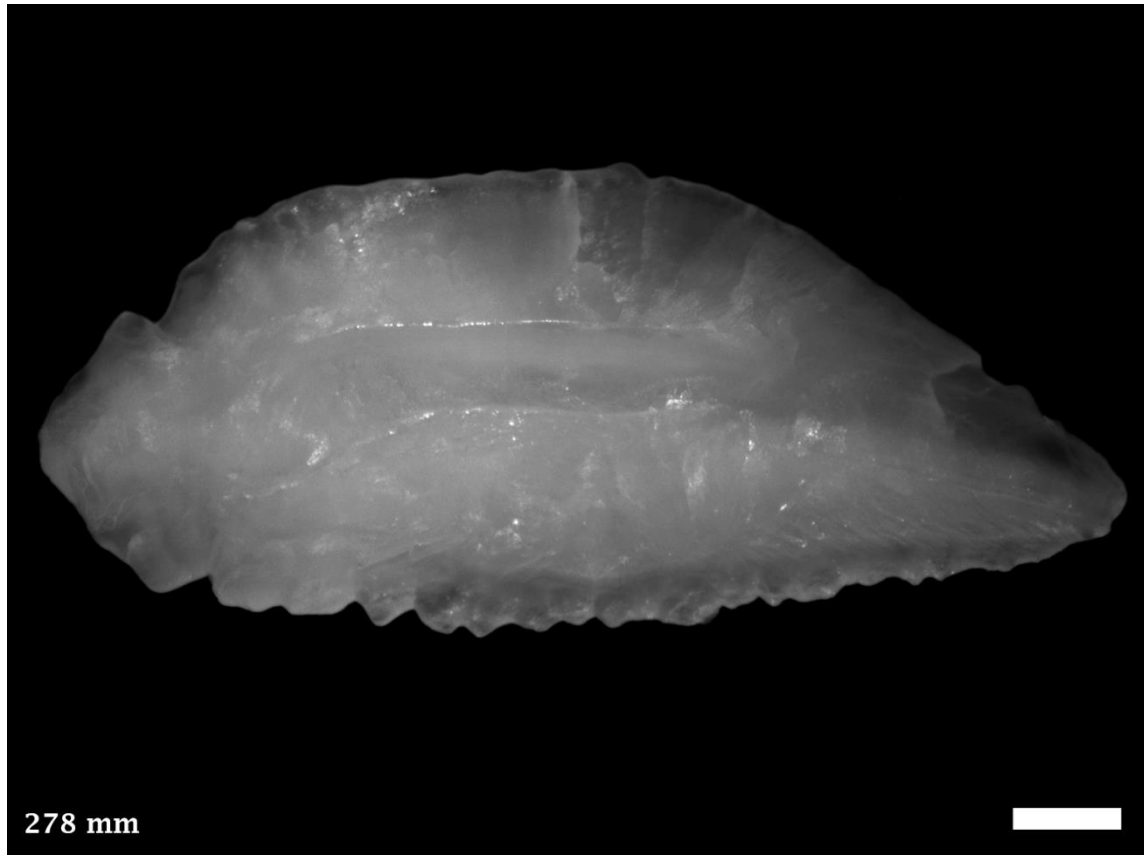


Distribution and Length: Coastal reefs from Jurien Bay, WA north around to Capricorn Group, Qld. 250 mm TL.



5.93 *Paraplesiops meleagris*, Southern Blue Devil

PERCIFORMES PLESIOPIDAE (Prettyfins)

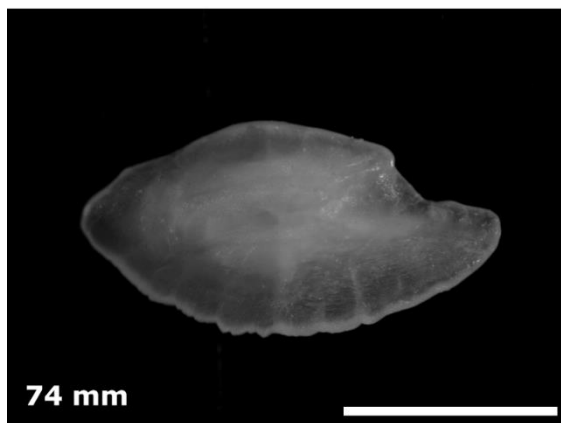


Distribution and Length: Coastal and offshore waters from Houtman Abrolhos, WA south to Port Phillip Bay, Victoria. 360 mm TL.



5.94 *Trachinops noarlungae*, Yellowhead Hulafish

PERCIFORMES PLESIOPIDAE (Prettyfins)

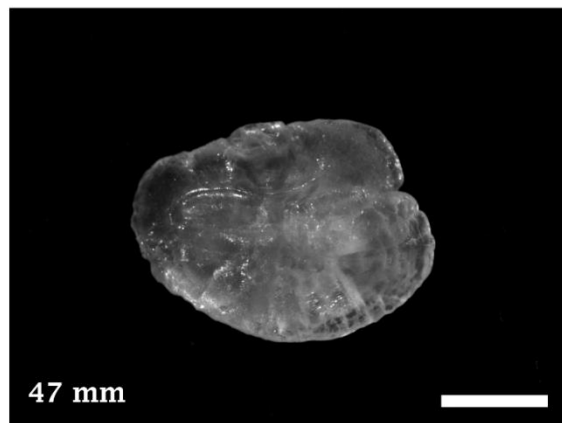
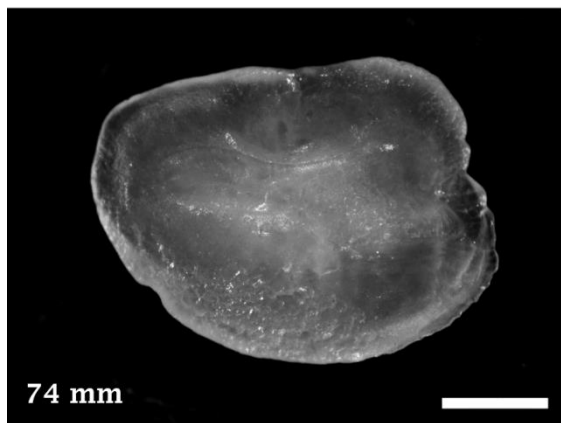
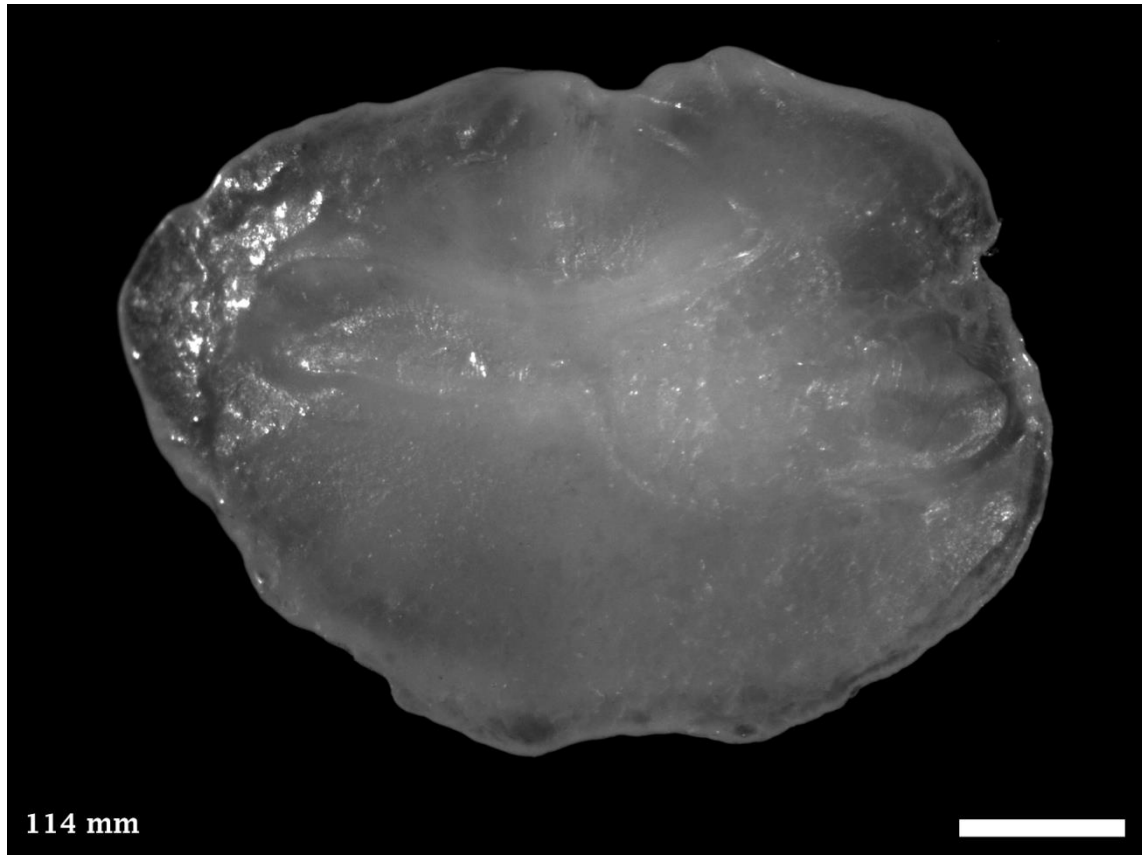


Distribution and Length: Coastal reefs from Houtman Abrolhos, WA south to Kangaroo Island, SA. 150 mm SL.



5.95 *Ostorhinchus rueppellii*, Western Gobbleguts

PERCIFORMES APOGONIDAE (Cardinalfishes)

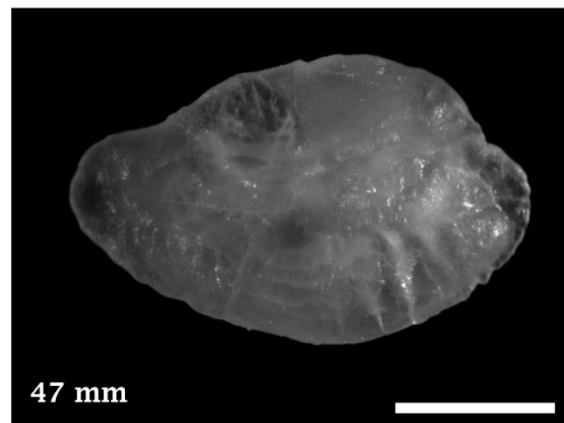
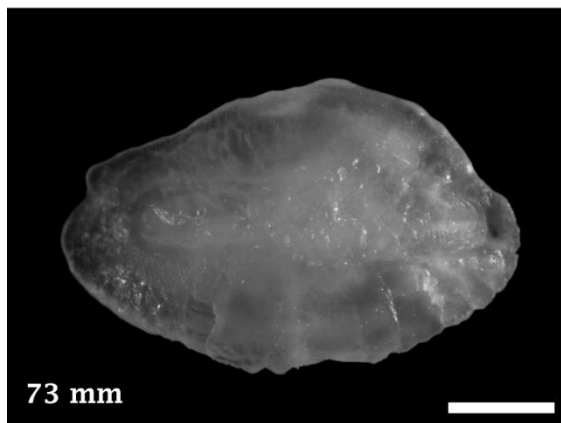
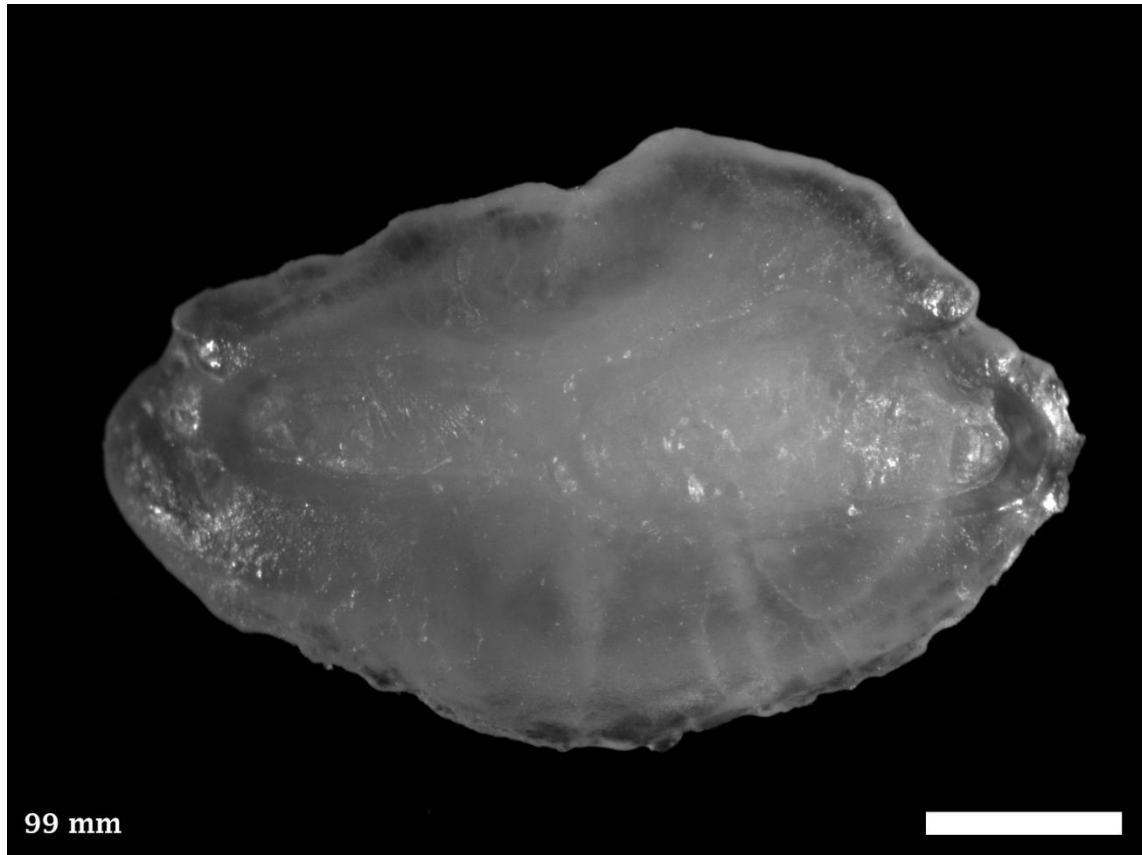


Distribution and Length: Estuarine and coastal waters from Albany, WA north to Northern Territory. 120 mm TL.



5.96 *Ostorhinchus victoriae*, Western Striped Cardinalfish

PERCIFORMES APOGONIDAE (Cardinalfishes)

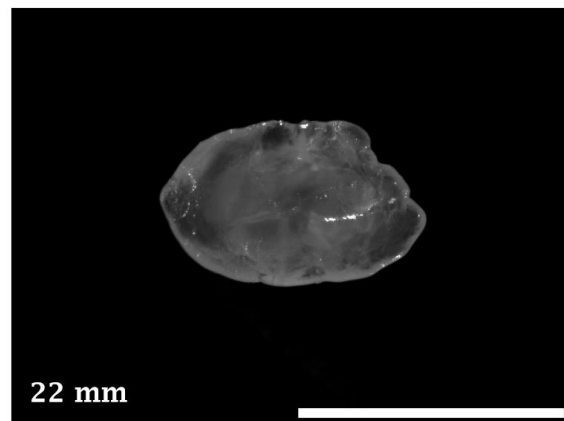
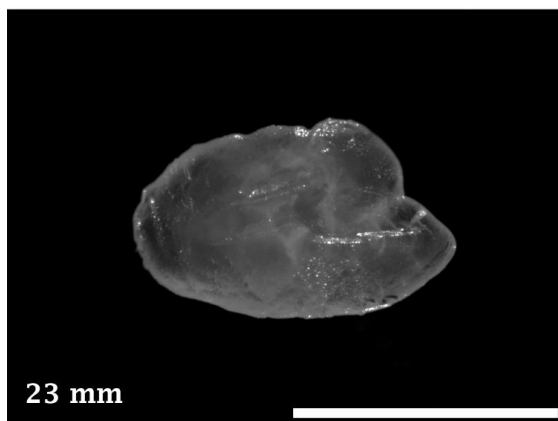
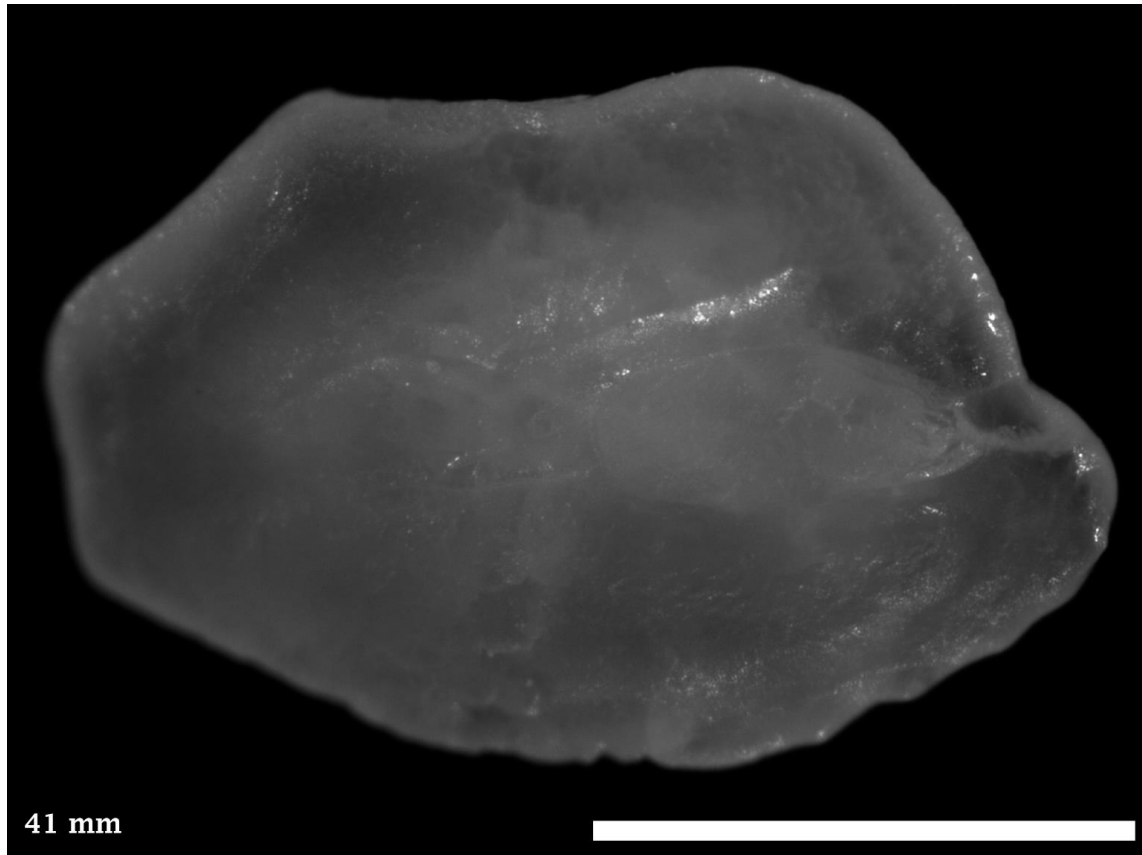


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south to Cape Leeuwin. 140 mm TL.



5.97 *Siphamia cephalotes*, Wood's Siphonfish

PERCIFORMES APOGONIDAE (Cardinalfishes)

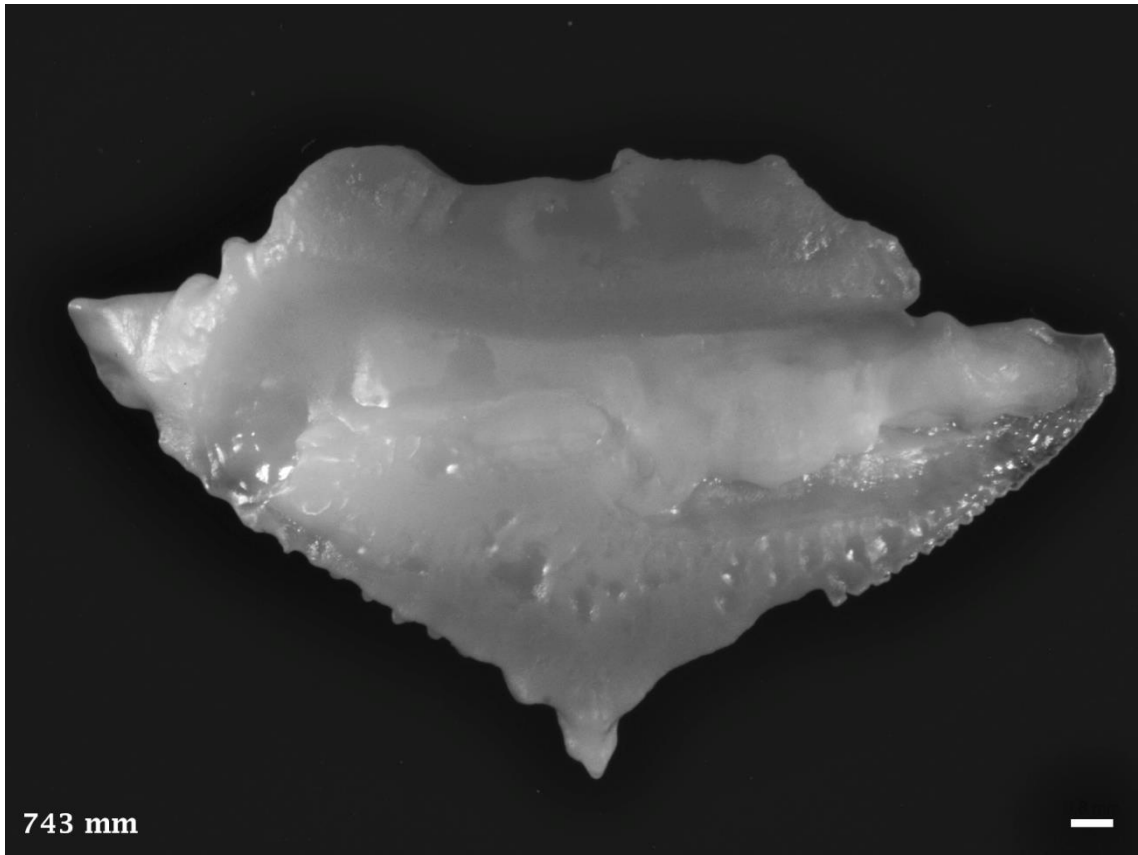


Distribution and Length: Estuarine and coastal waters from Dongara, WA south around to Sydney, NSW, including Tasmania. 55 mm SL.



5.98 *Epigonus telescopus*, Black Deepsea Cardinalfish

PERCIFORMES EPIGONIDAE (Cardinalfishes)

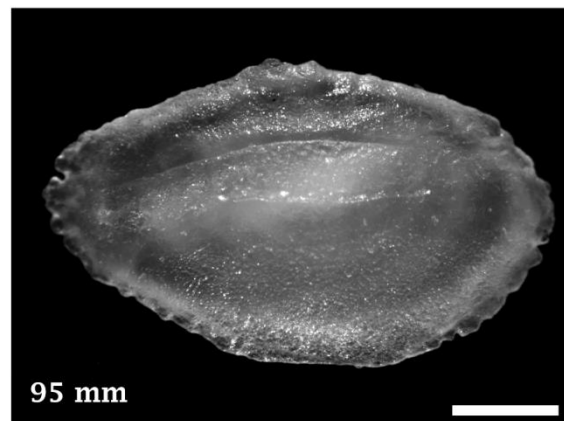
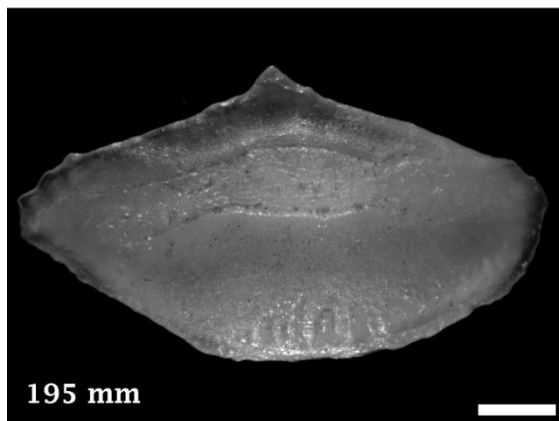
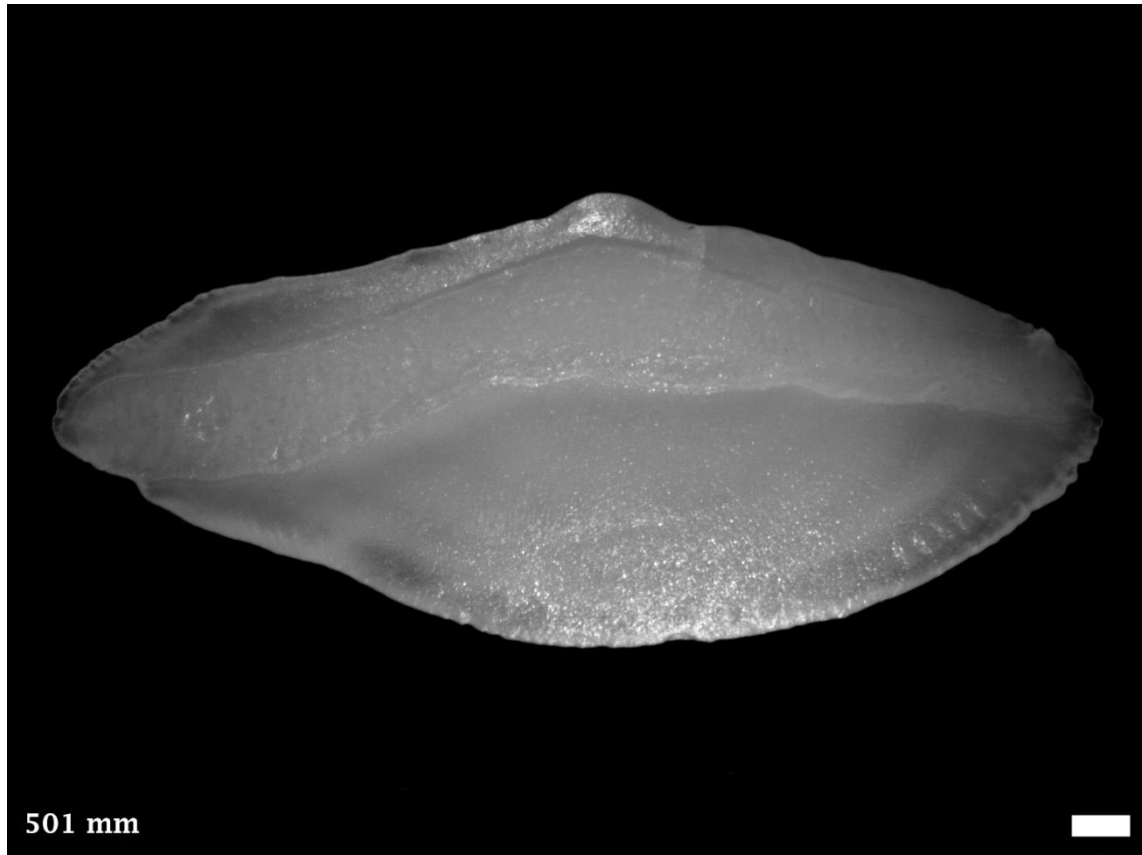


Distribution and Length: Deep offshore waters from Southwest WA around to Northern NSW, including Tasmania. 750 mm TL.



5.99 *Sillaginodes punctatus*, King George Whiting

PERCIFORMES SILLAGINIDAE (Whittings)

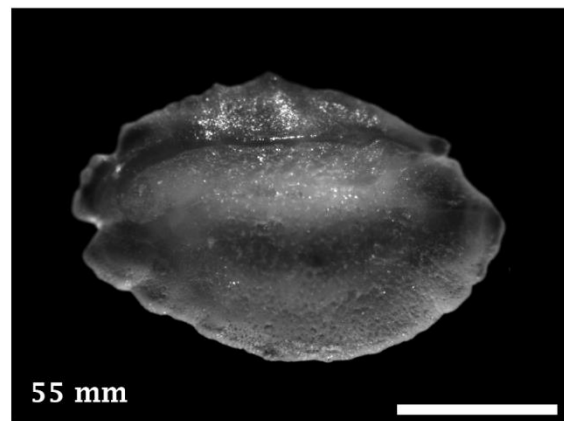
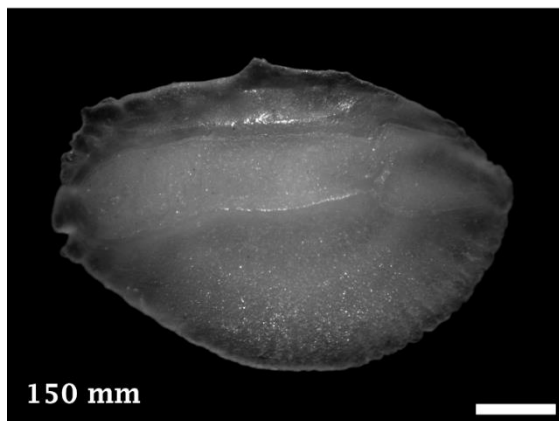
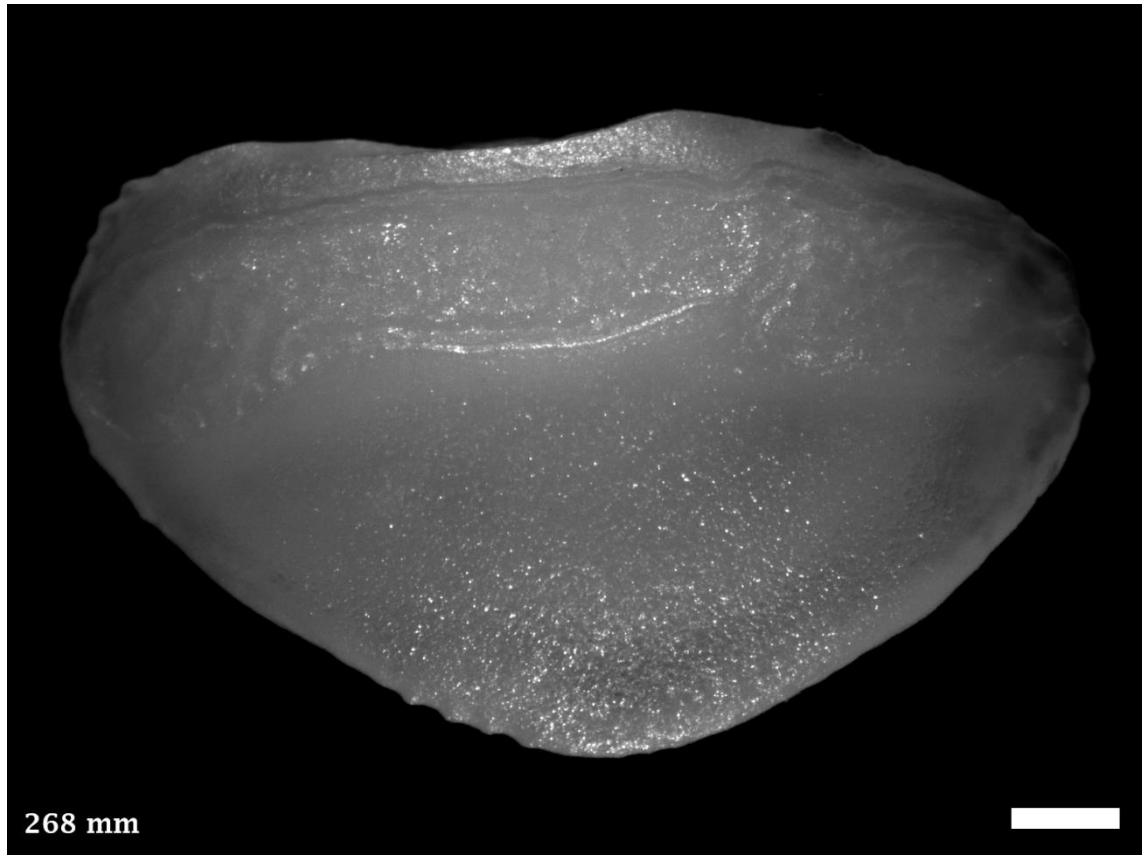


Distribution and Length: Estuarine, coastal and offshore waters from Jurien Bay, WA south around to southern New South Wales, including Tasmania. 720 mm TL.



5.100 *Sillago bassensis*, Southern School Whiting

PERCIFORMES SILLAGINIDAE (Whittings)

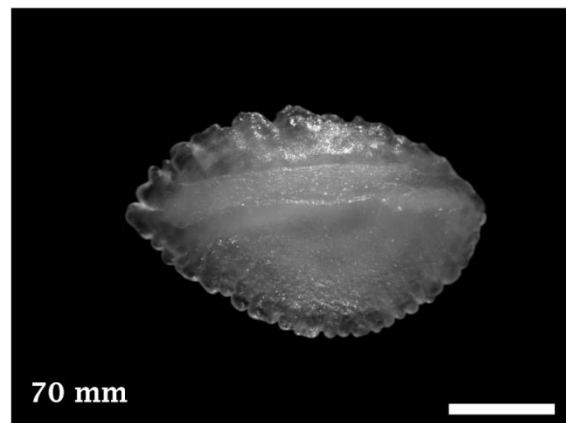
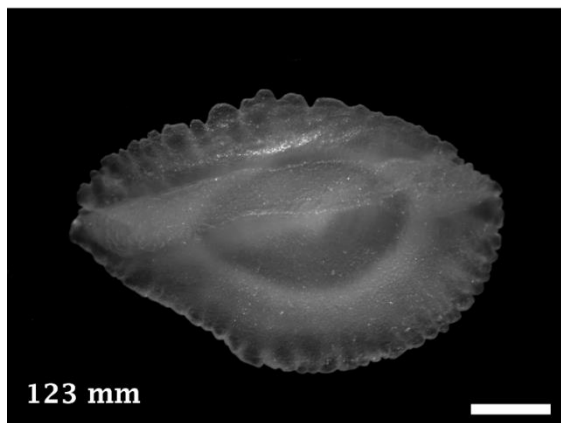
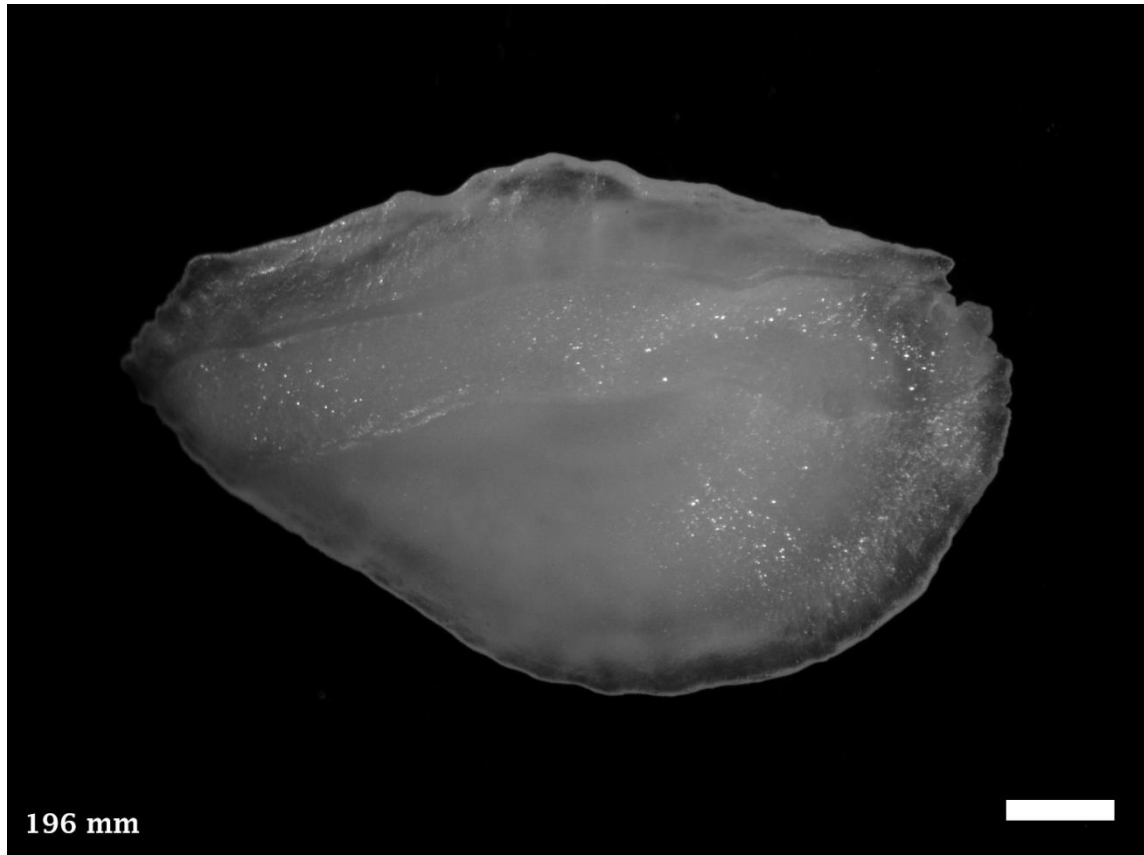


Distribution and Length: Estuarine, coastal and offshore waters from Geraldton, WA south to Western Port, Victoria. 360 mm TL.



5.101 *Sillago burrus*, Western Trumpeter Whiting

PERCIFORMES SILLAGINIDAE (Whittings)

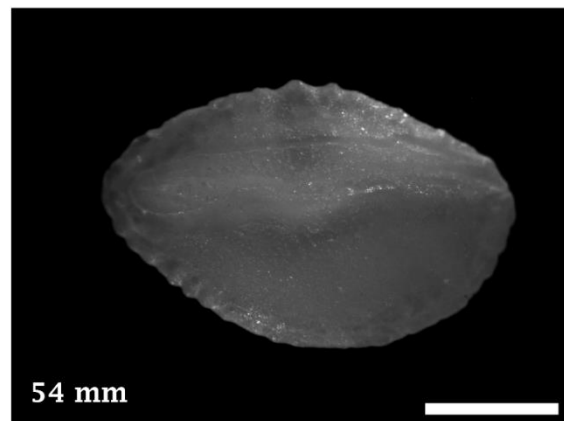
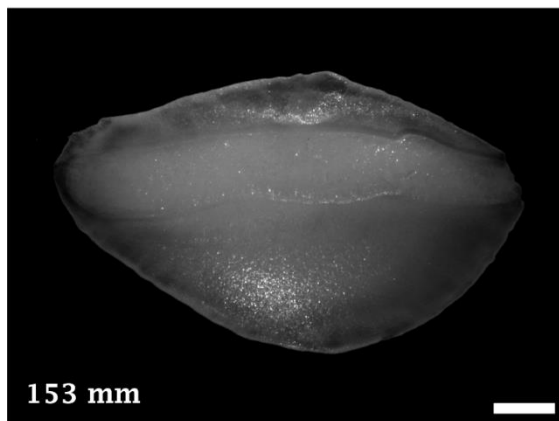
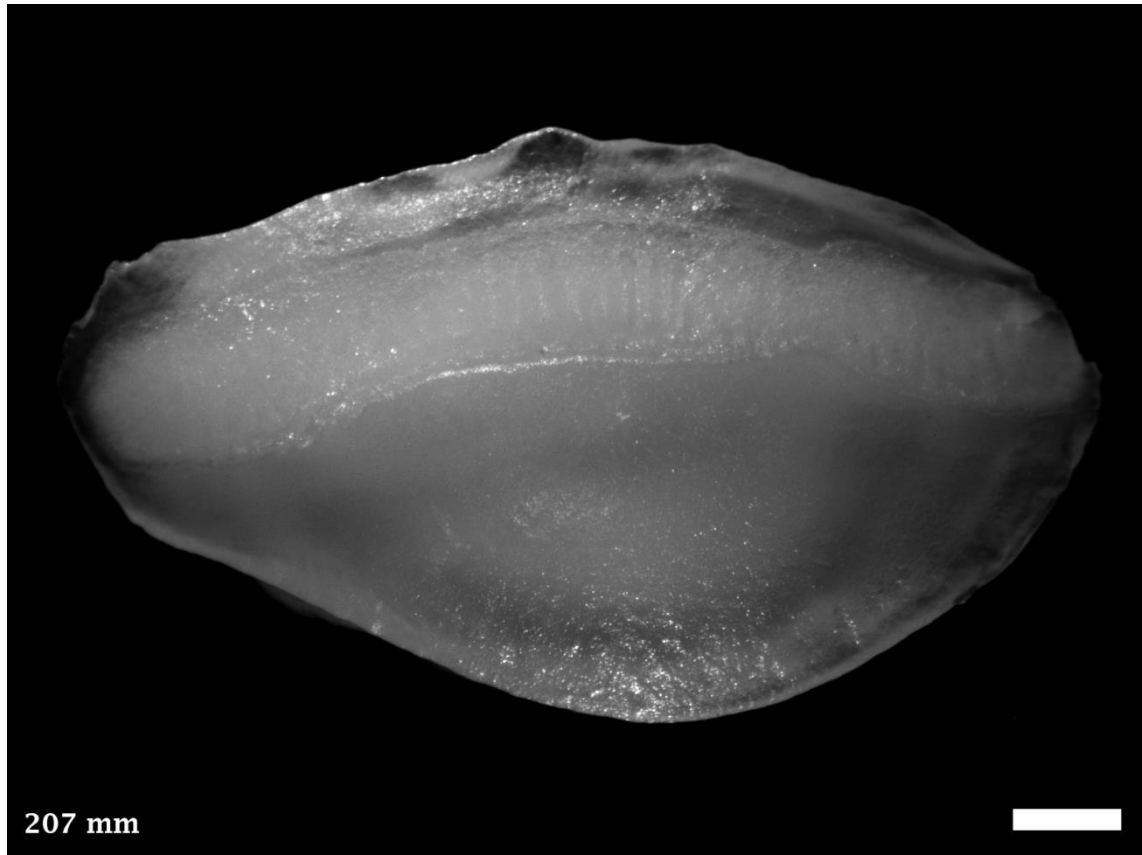


Distribution and Length: Estuarine and coastal waters from Geographe Bay, WA north around to Northern Territory. 300 mm TL.



5.102 *Sillago c.f. robusta*, like Stout Whiting

PERCIFORMES SILLAGINIDAE (Whittings)

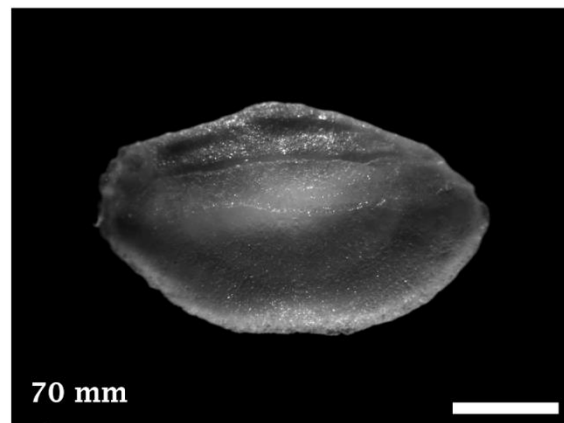
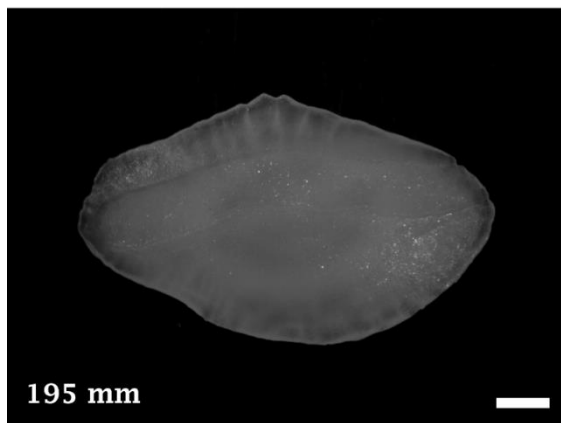
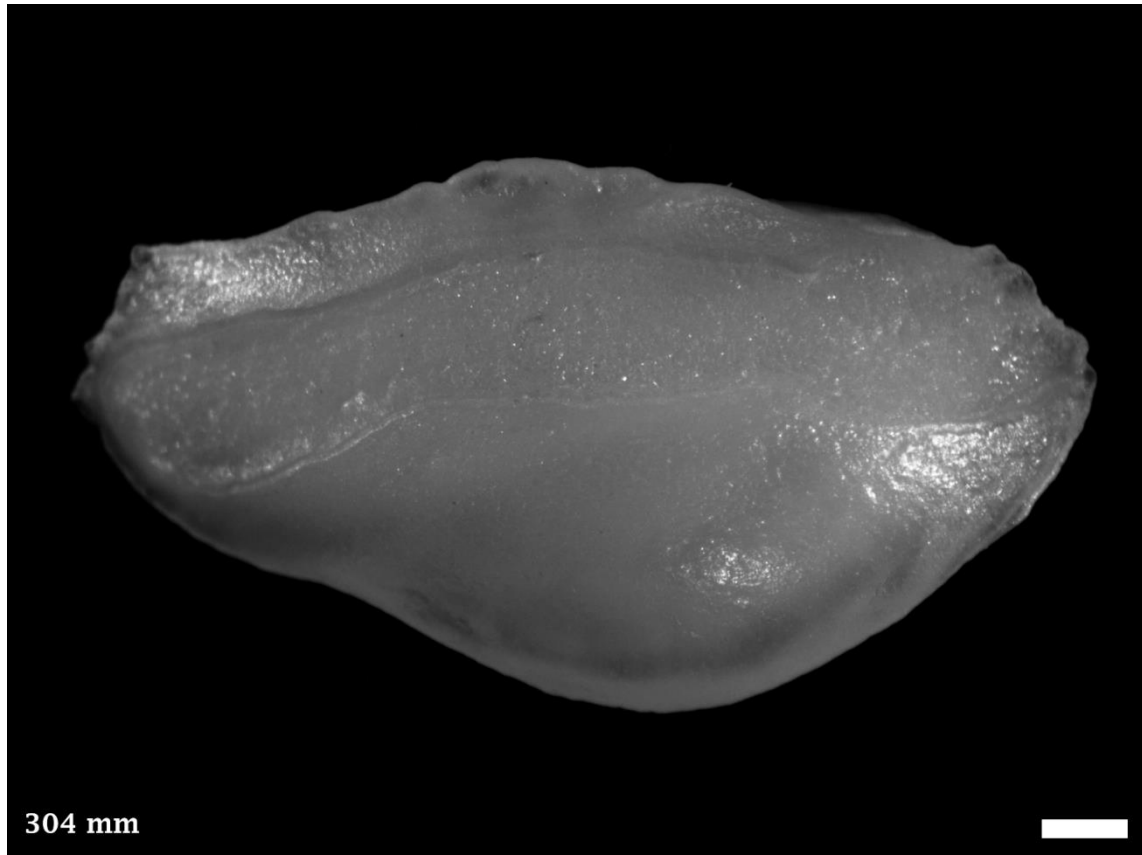


Distribution and Length: Coastal and offshore waters from Shark Bay, WA south to Geographe Bay, WA. 250 mm TL.



5.103 *Sillago schomburgkii*, Yellowfin Whiting

PERCIFORMES SILLAGINIDAE (Whittings)

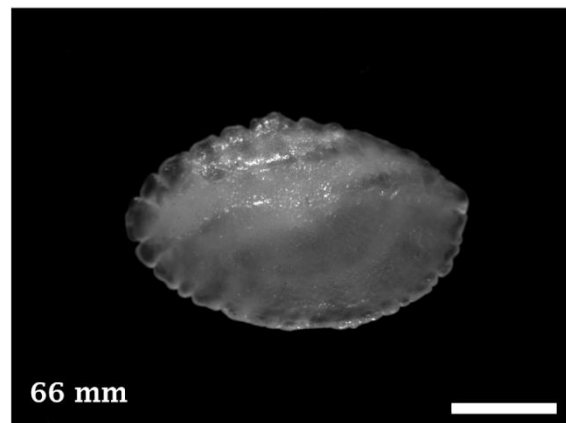
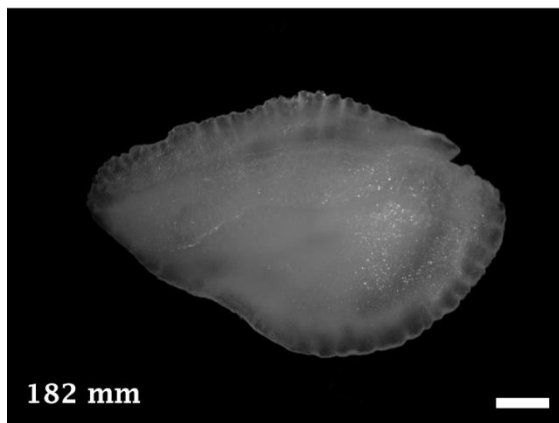
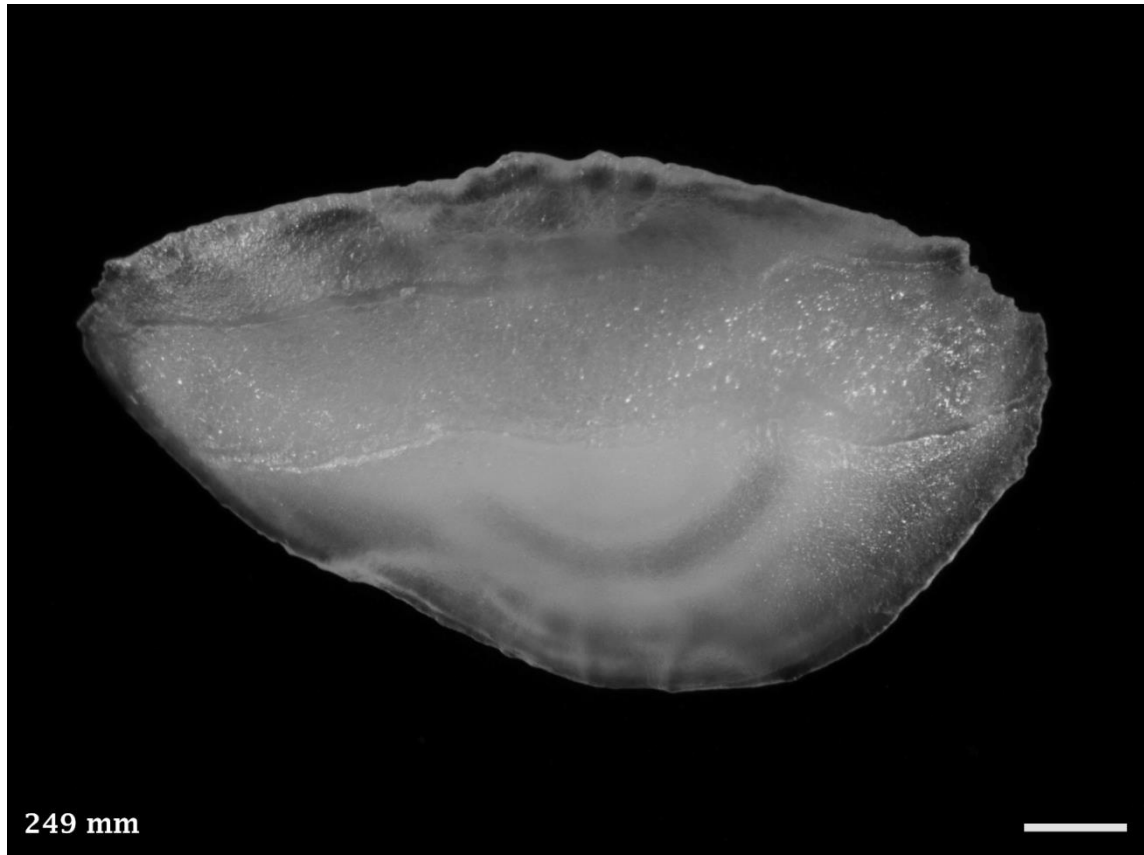


Distribution and Length: Estuarine and coastal waters from Exmouth, WA south to South Australia. 420 mm TL.



5.104 *Sillago vittata*, Western School Whiting

PERCIFORMES SILLAGINIDAE (Whittings)

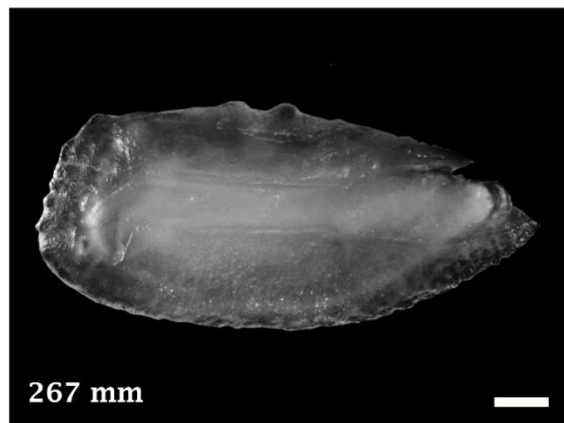
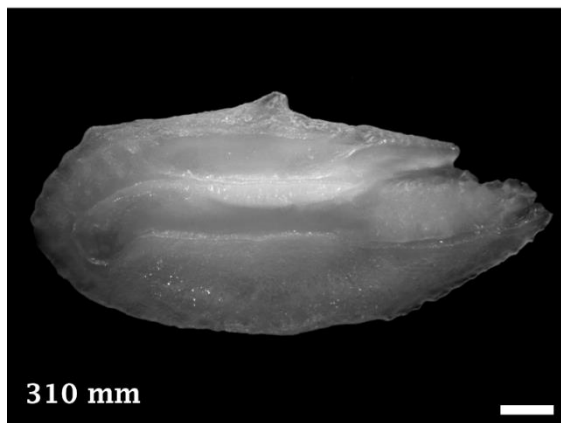
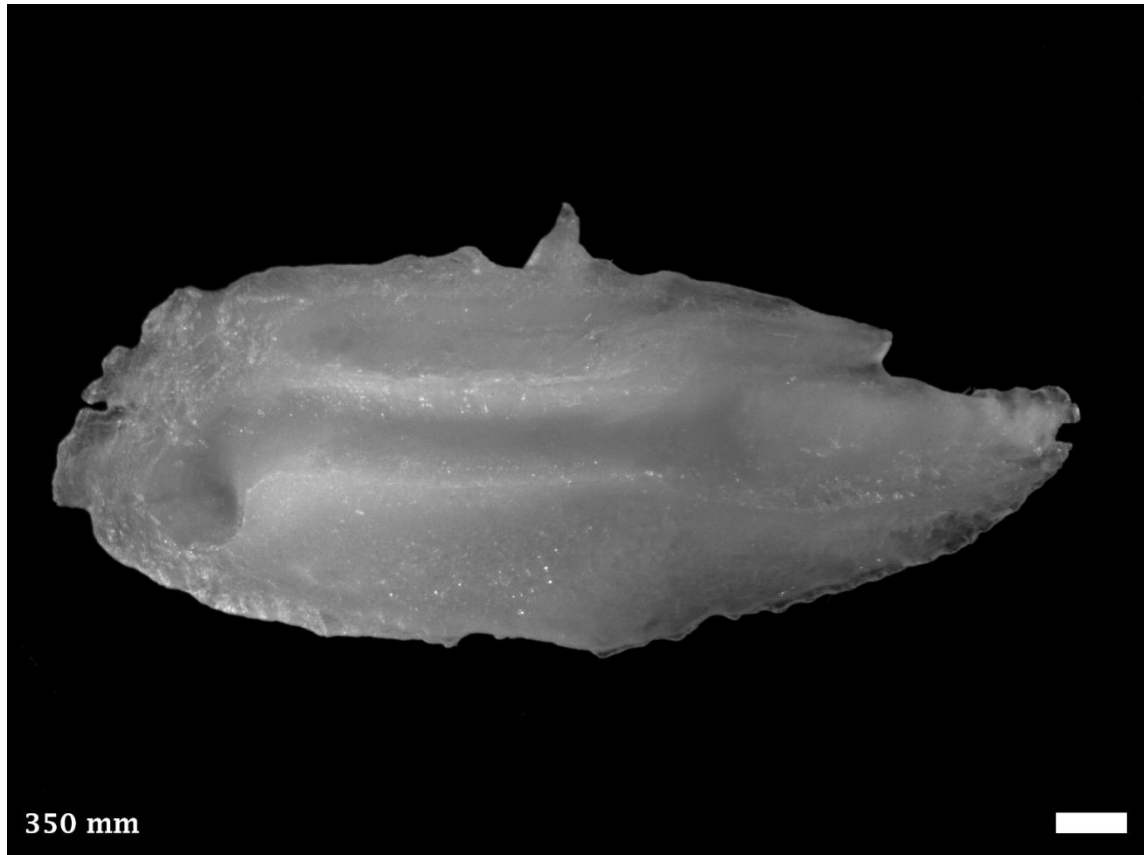


Distribution and Length: Coastal waters from Coral Bay, WA south to Geographe Bay, WA. 350 mm TL



5.105 *Dinolestes lewini*, Longfin Pike

PERCIFORMES DINOLESTIDAE (Pikes)

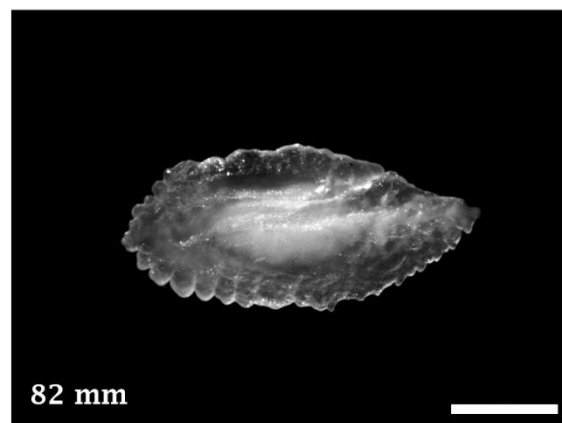
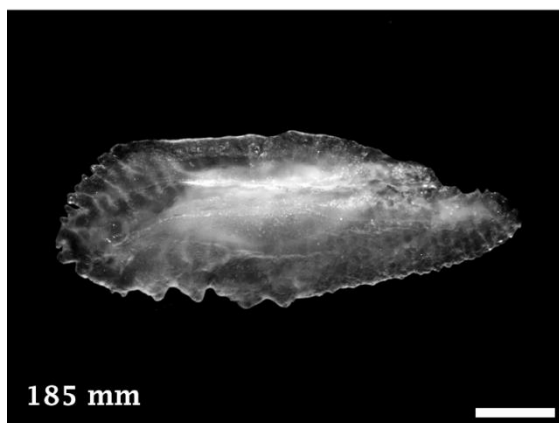
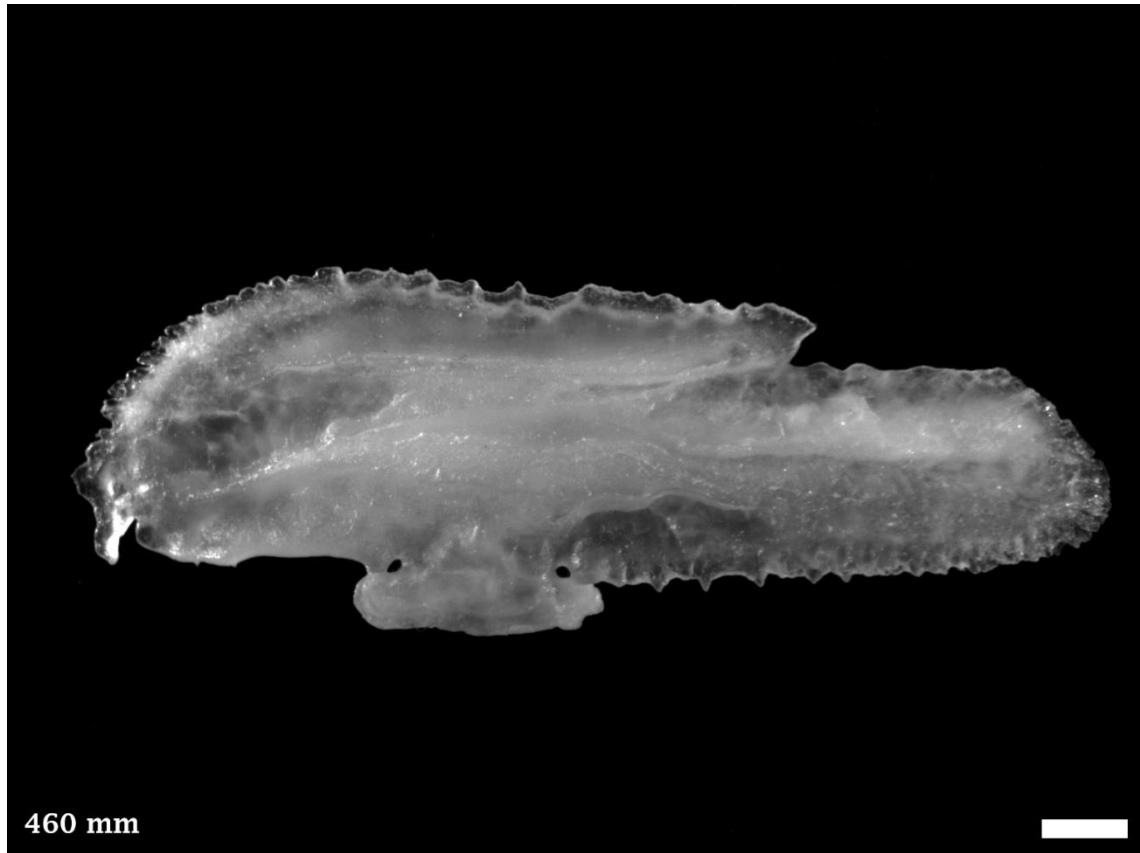


Distribution and Length: Coastal waters from Fremantle, WA south around to Port Macquarie, NSW. 900 mm TL.



5.106 *Pomatomus saltatrix*, Tailor

PERCIFORMES POMATOMIDAE (Tailors)

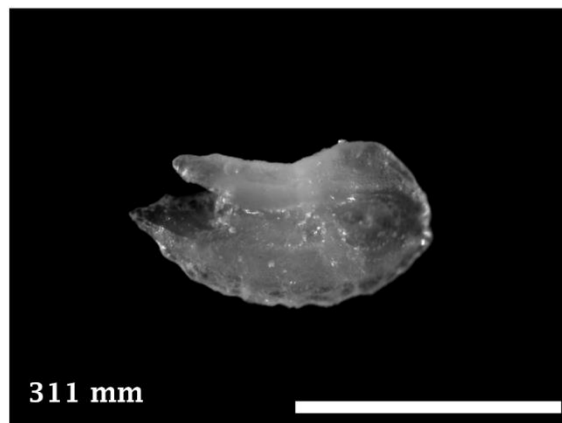
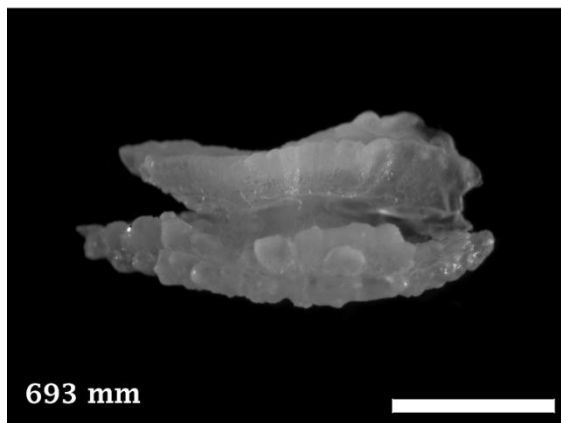
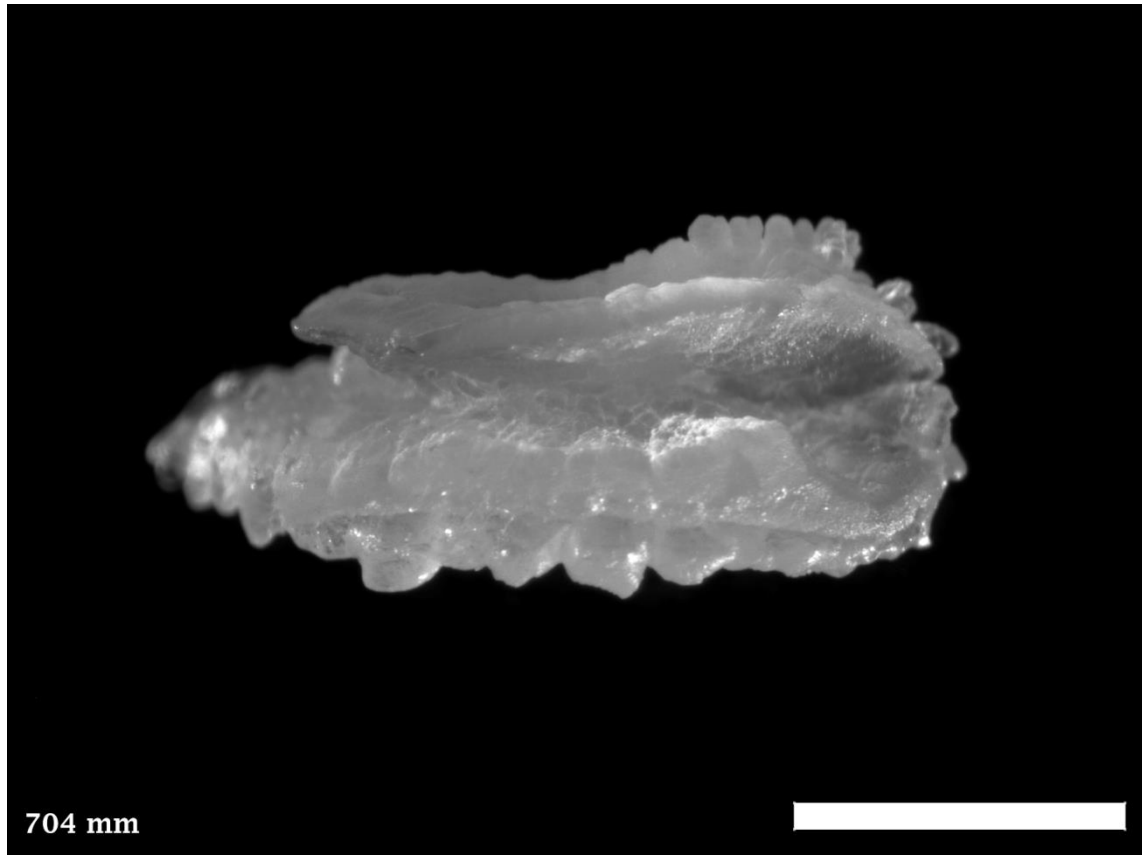


Distribution and Length: Estuarine, coastal and offshore waters from Shark Bay, WA south around to southern Queensland. 1200 mm TL.



5.107 *Echeneis naucrates*, Sharksucker

PERCIFORMES ECHENEIDAE (Remoras)

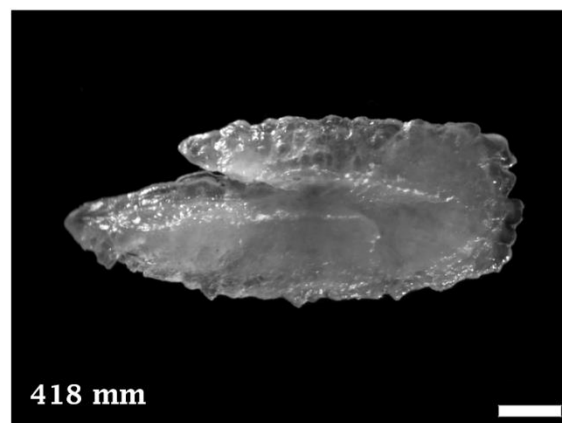
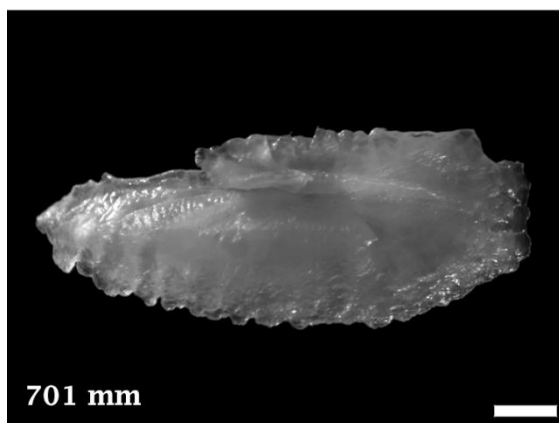
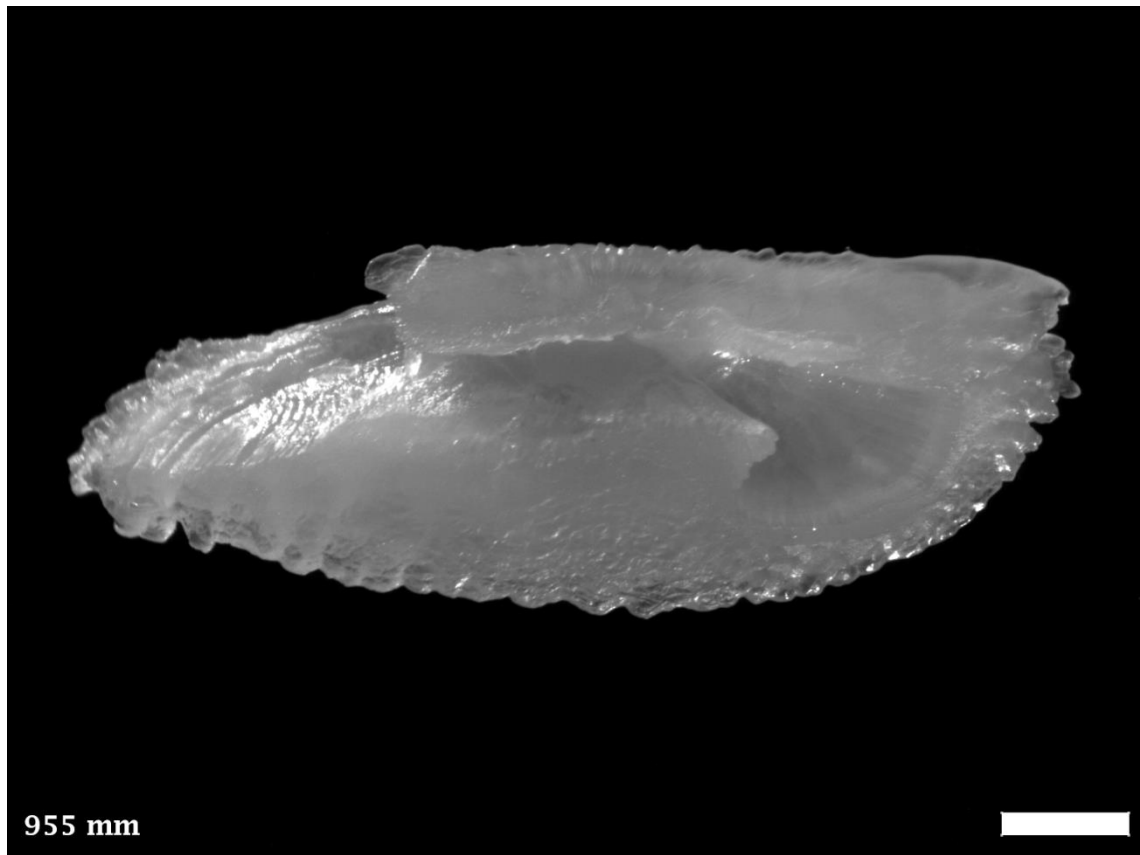


Distribution and Length: Coastal water from circum-Australia, including Tasmania. 1000 mm TL.



5.108 *Rachycentron canadum*, Cobia

PERCIFORMES RACYCENTRIDAE (Black Kingfishes)

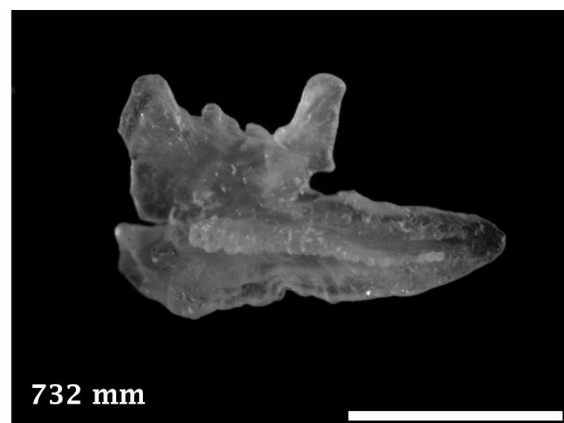
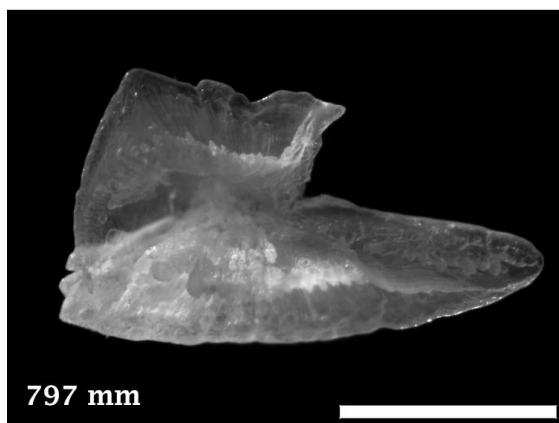
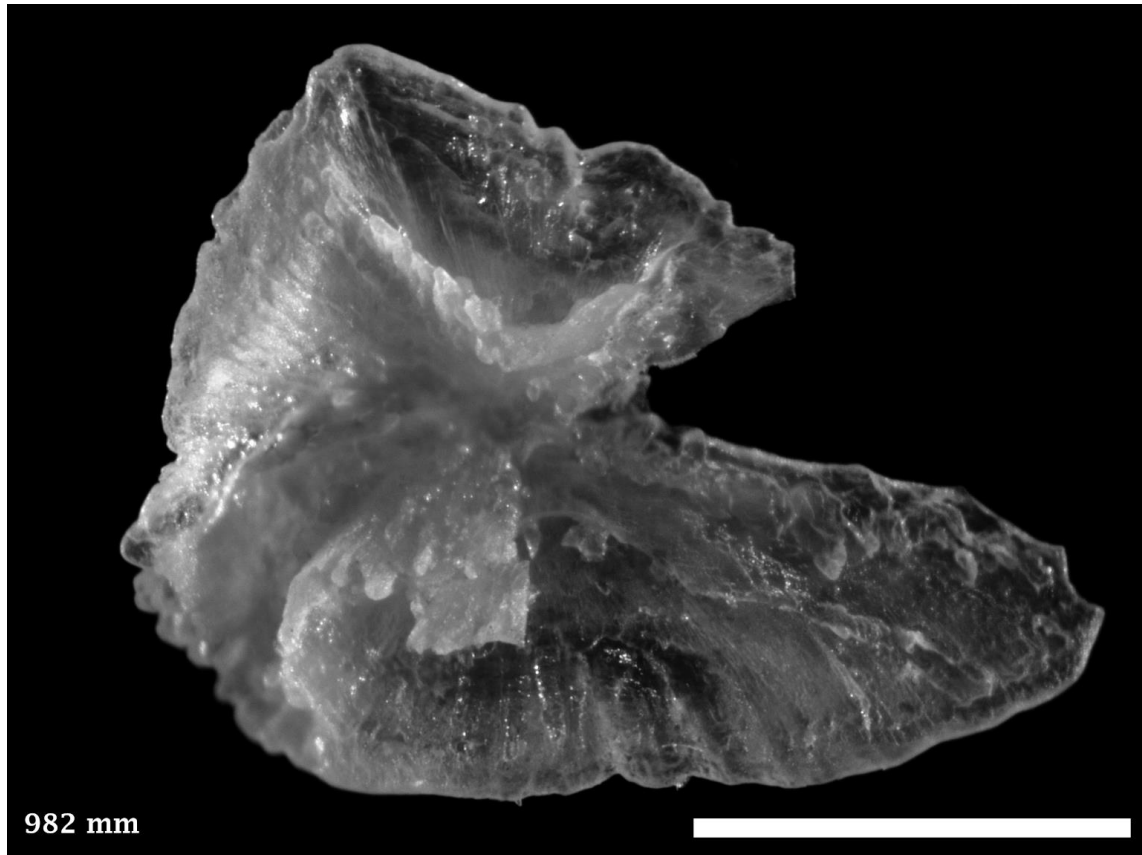


Distribution and Length: Coastal waters from Cape Naturaliste, WA north around to Jervis Bay, NSW. 2020 mm TL.



5.109 *Coryphaena hippurus*, Mahi Mahi

PERCIFORMES CORYPHAENIDAE (Dolphinfishes)

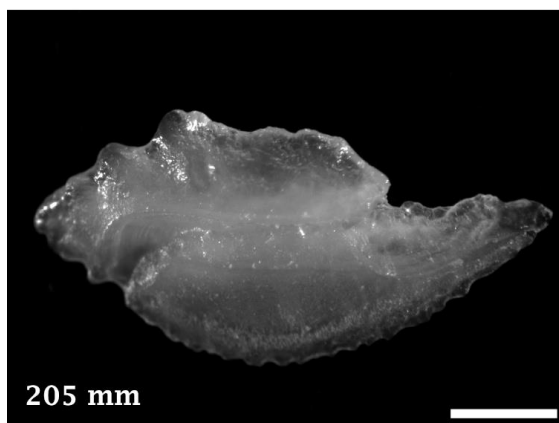
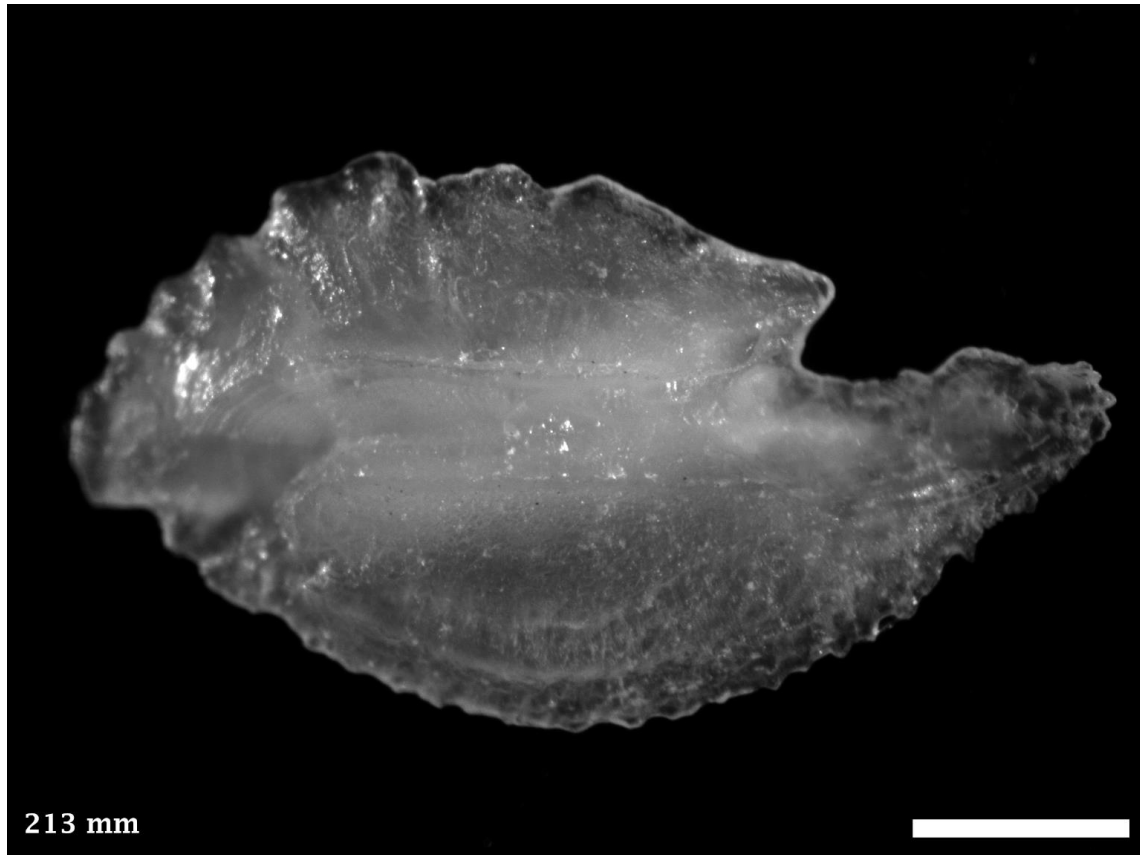


Distribution and Length: Offshore waters circum-Australia, excluding Tasmania. 1620 mm TL.



5.110 *Decapterus muroadsi*, Temperate Scad

PERCIFORMES CARANGIDAE (Trevallies)

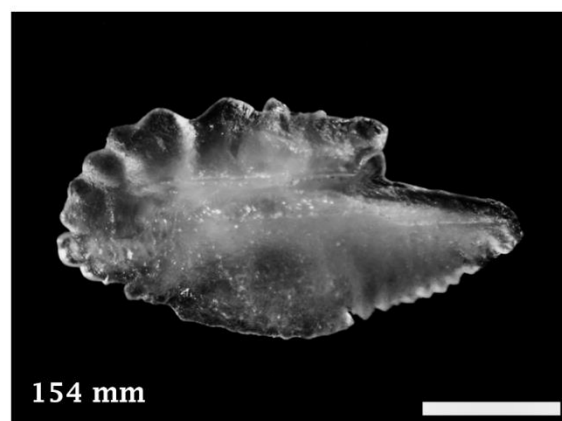
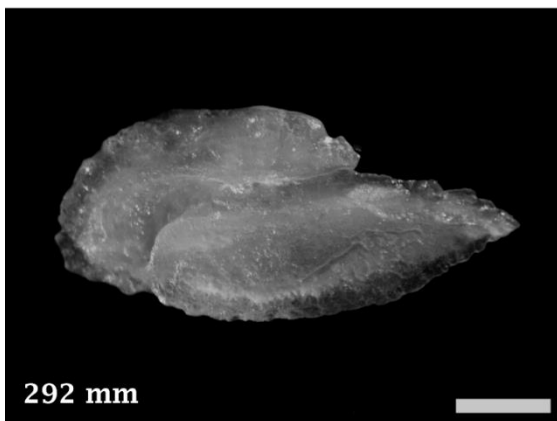
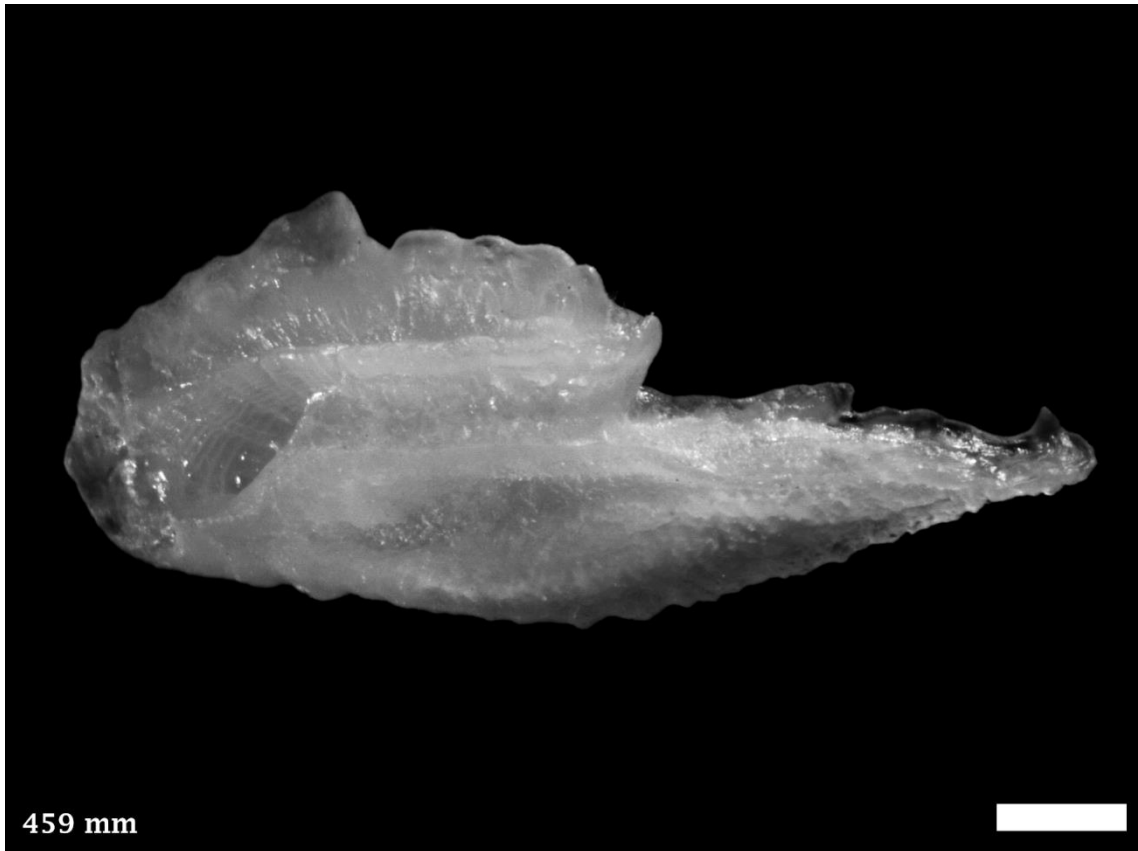


Distribution and Length: Coastal waters from Fremantle, WA north around to Sydney, NSW. 300 mm TL.



5.111 *Pseudocaranx georgianus*, Silver Trevally

PERCIFORMES CARANGIDAE (Trevallies)

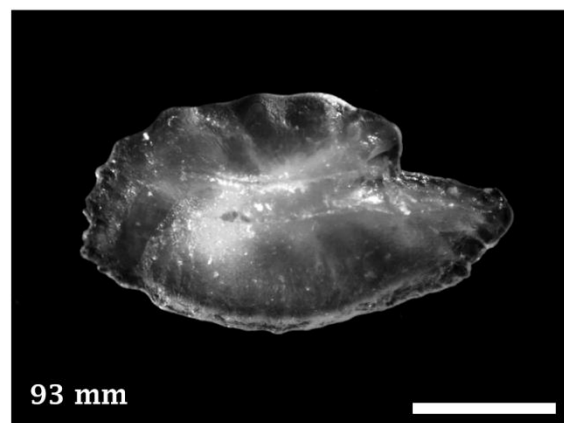
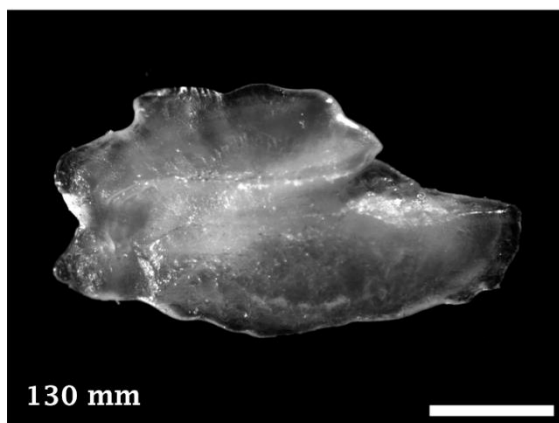
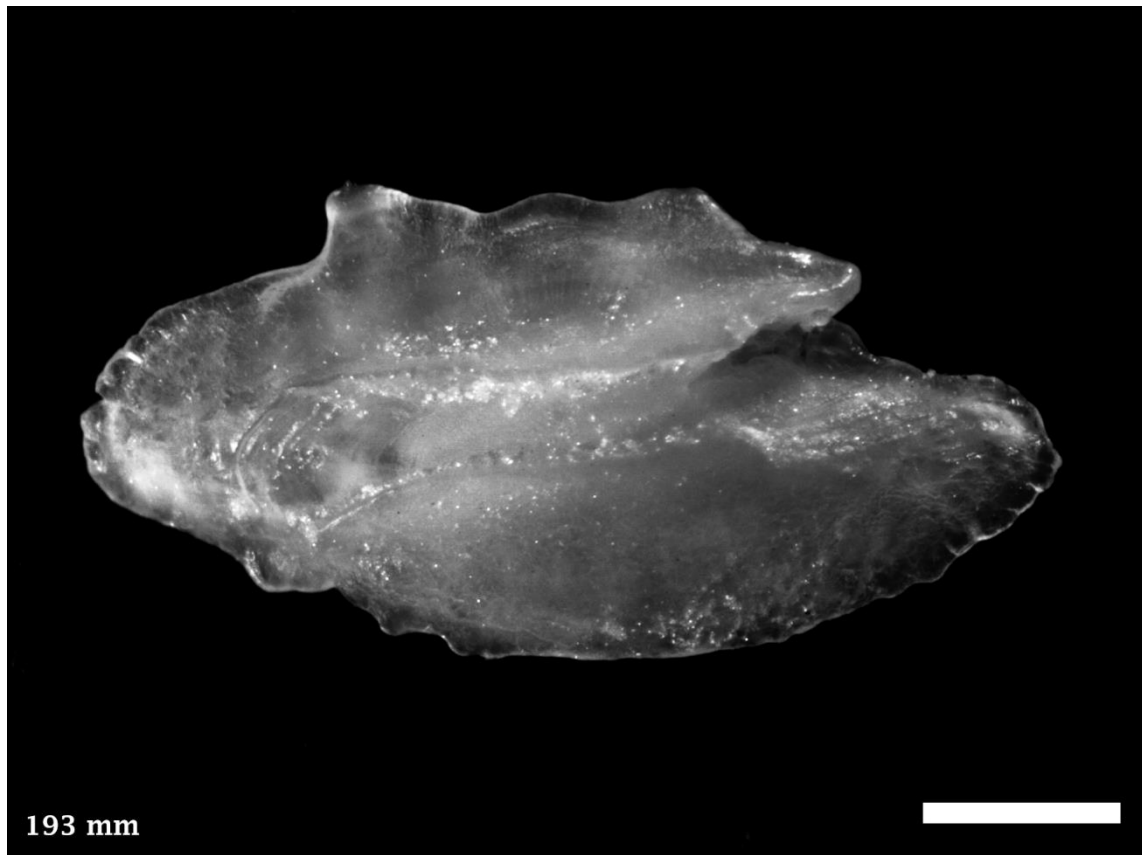


Distribution and Length: Coastal and estuarine waters from North West Cape, WA south around to southern Queensland. 940 mm TL.



5.112 *Pseudocaranx wright*, Sand Trevally

PERCIFORMES CARANGIDAE (Trevallies)

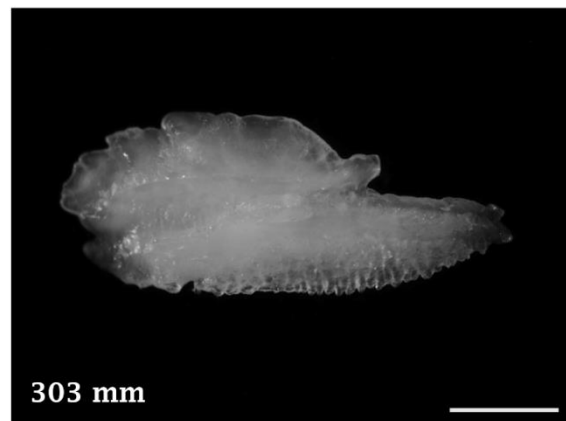
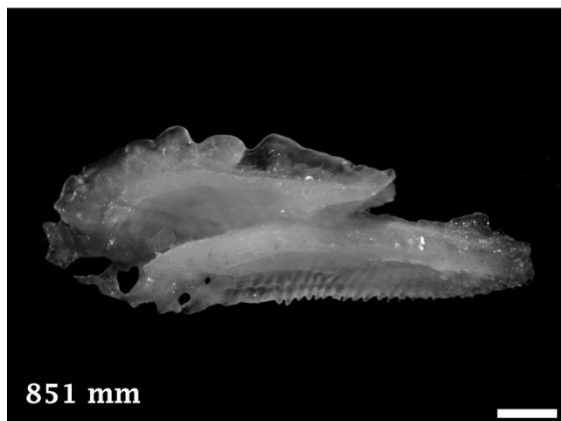
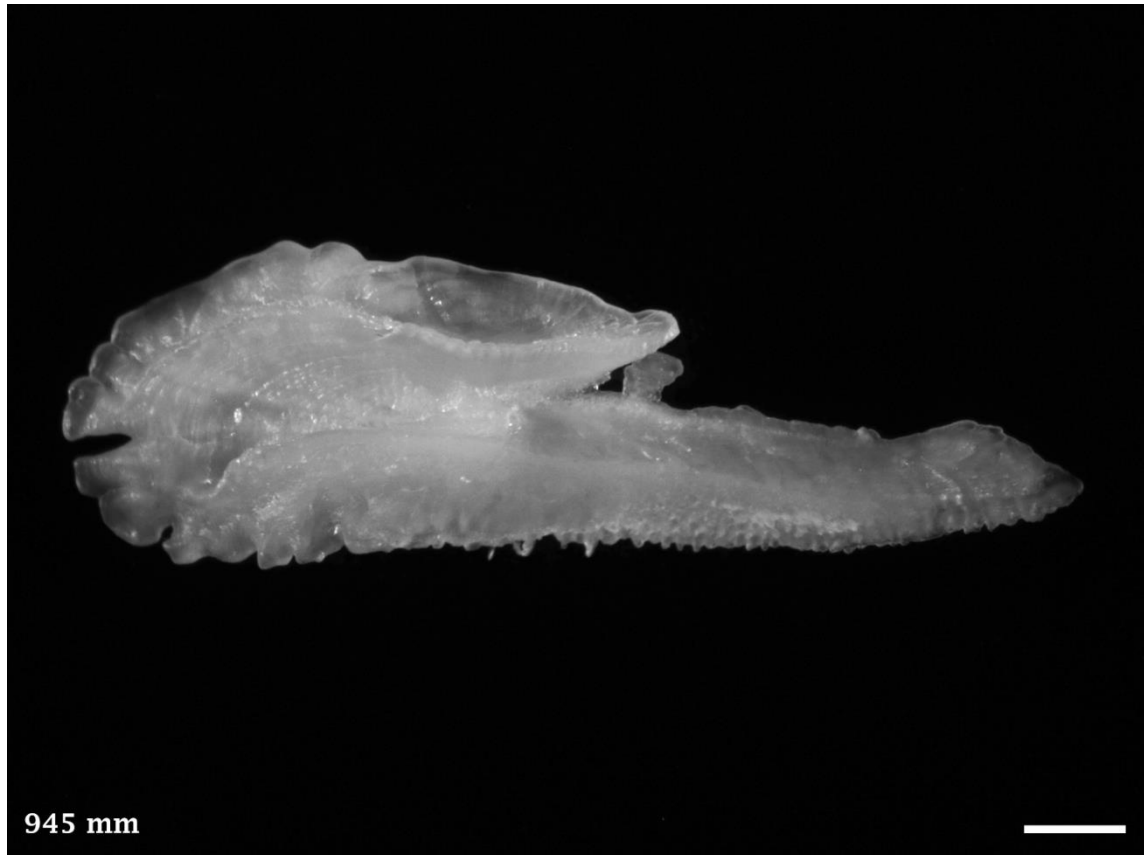


Distribution and Length: Coastal waters from Shark Bay, WA south around to southern Queensland. 250 mm TL.



5.113 *Seriola dumerili*, Amberjack

PERCIFORMES CARANGIDAE (Trevallies)

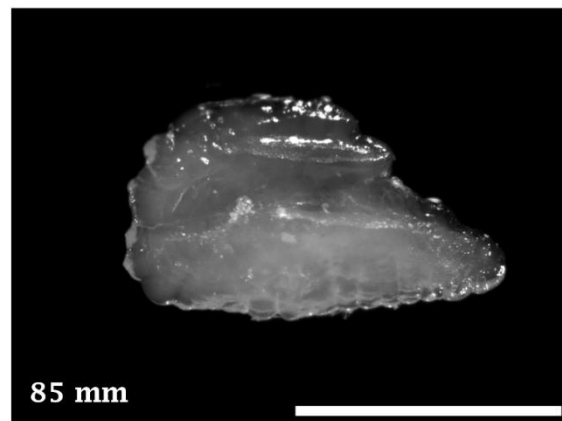
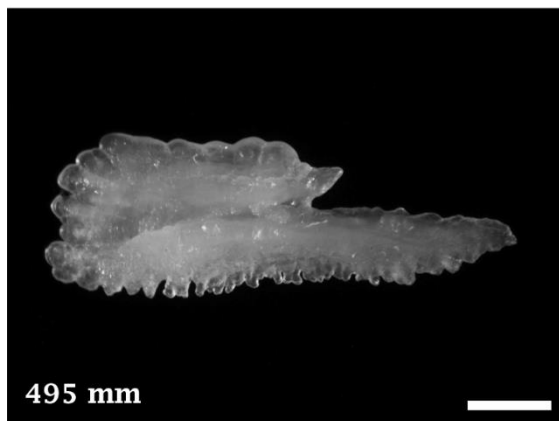
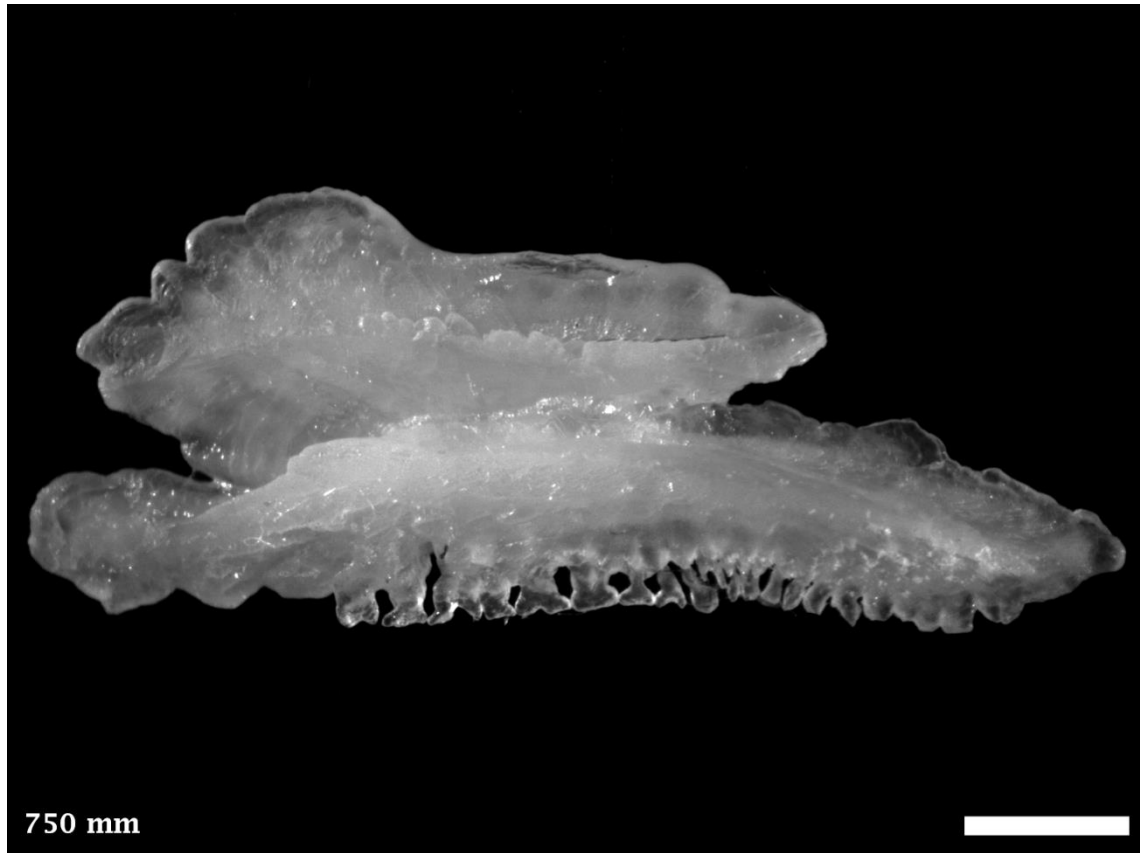


Distribution and Length: Coastal waters from Albany, WA north around to Wollongong, NSW. 1880 mm TL.



5.114 *Seriola hippos*, Samsonfish

PERCIFORMES CARANGIDAE (Trevallies)

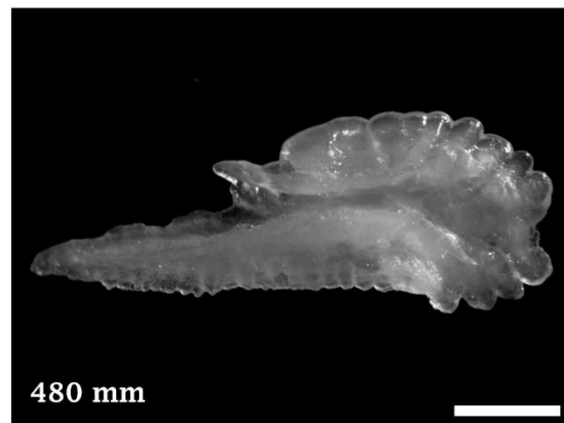
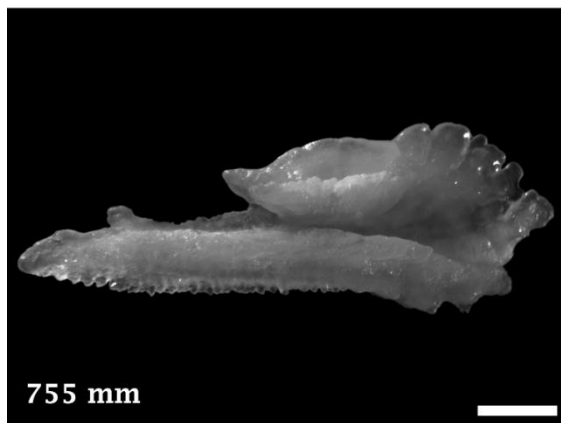
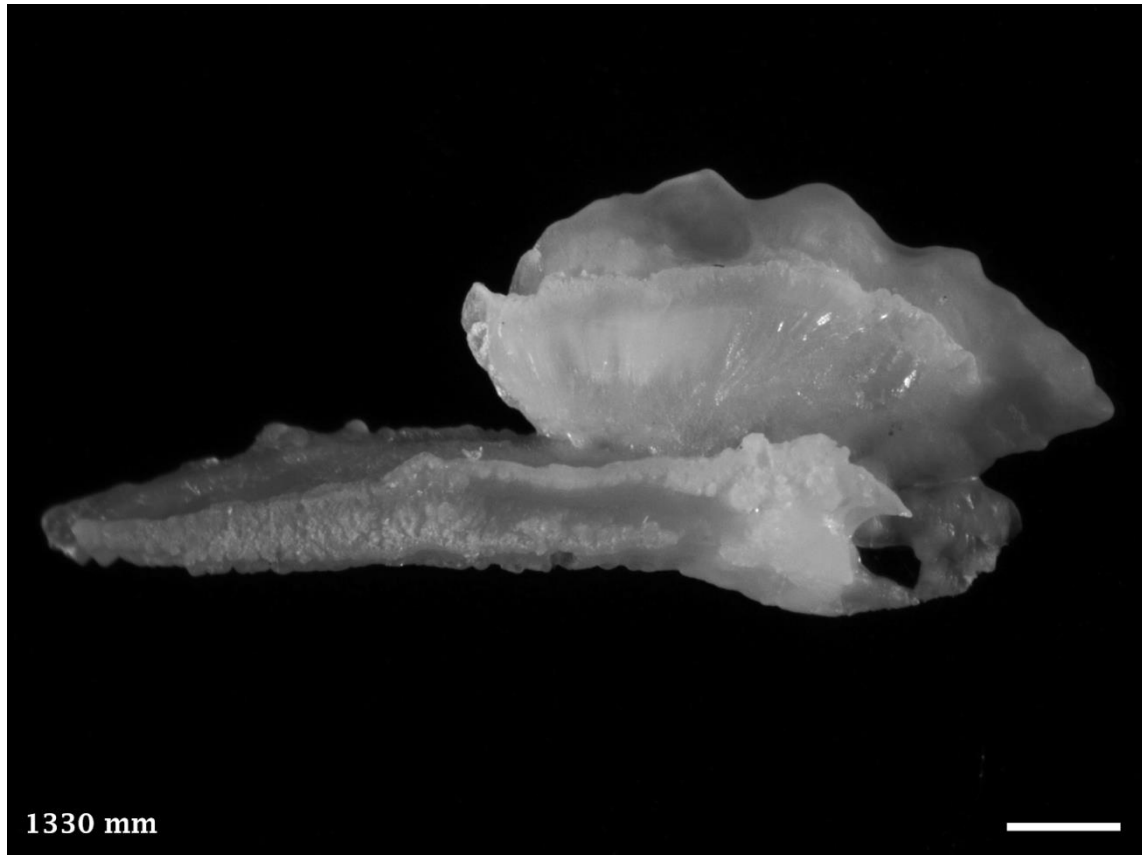


Distribution and Length: Coastal waters from Shark Bay, WA south around to York Peninsula, SA and southern Queensland south to Montague Is., NSW. 1800 mm TL.



5.115 *Seriola lalandi*, Yellowtail Kingfish

PERCIFORMES CARANGIDAE (Trevallies)

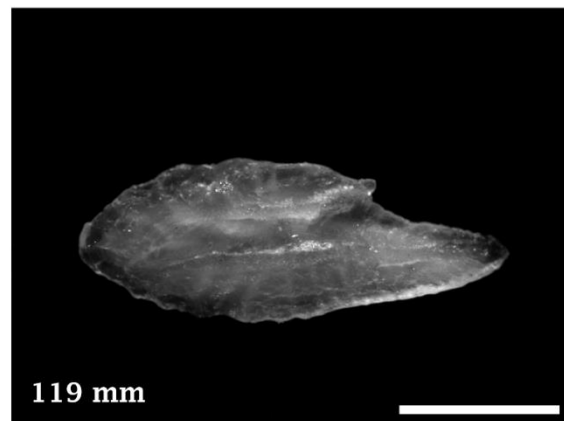
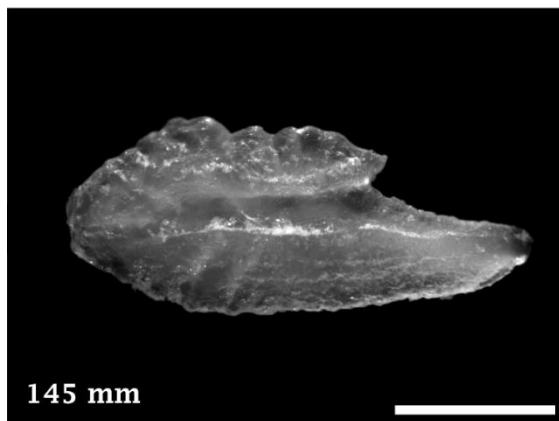
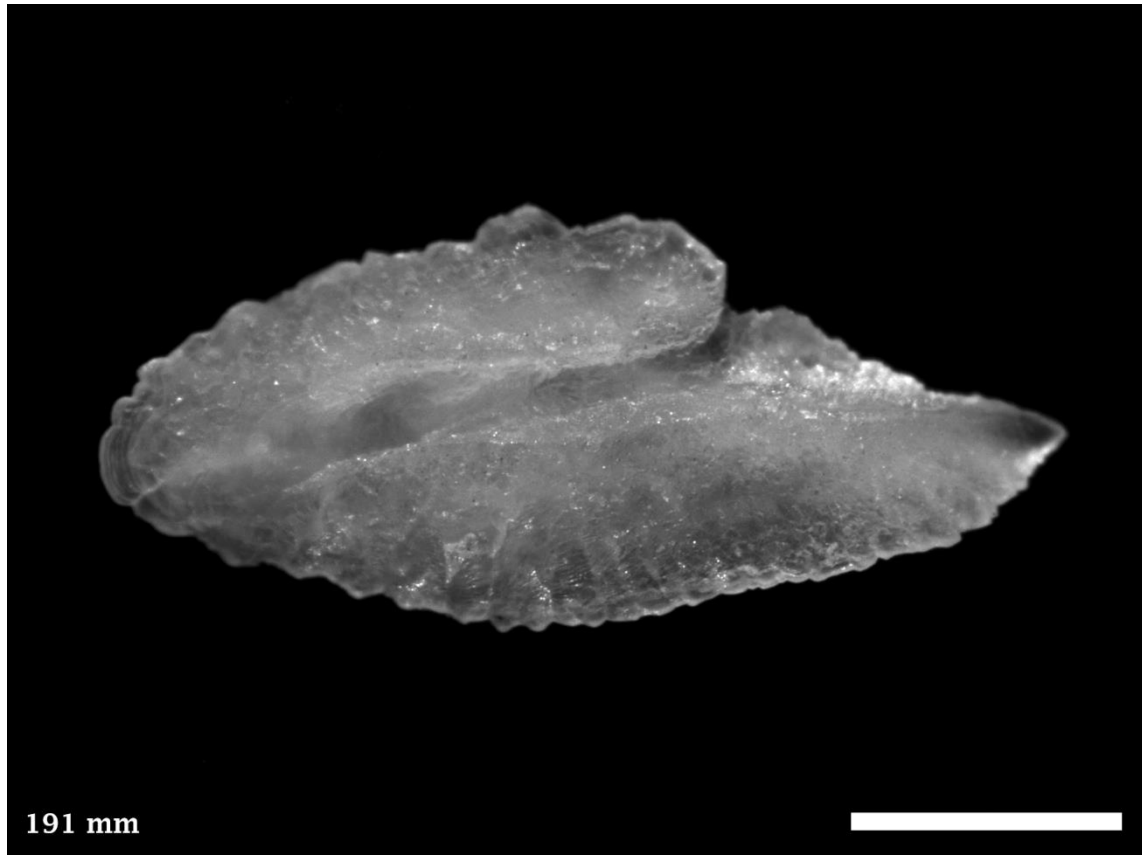


Distribution and Length: Coastal waters from Shark Bay, WA south around to southern Queensland. 2500 mm TL.



5.116 *Trachinotus baillonii*, Smallspotted Dart

PERCIFORMES CARANGIDAE (Trevallies)

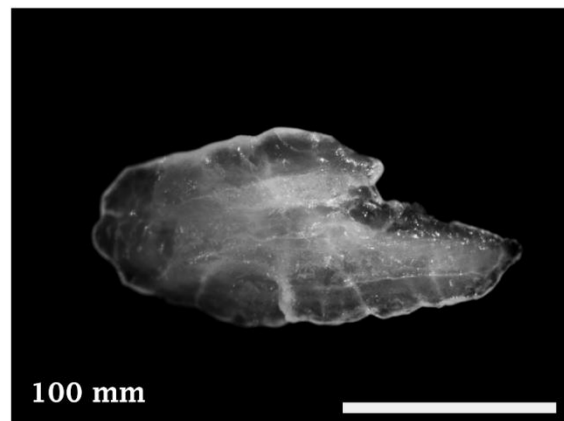
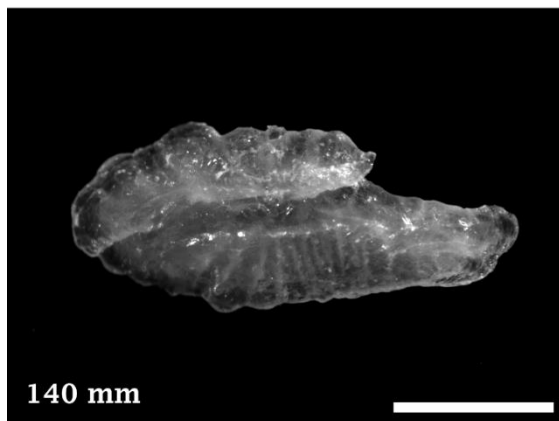
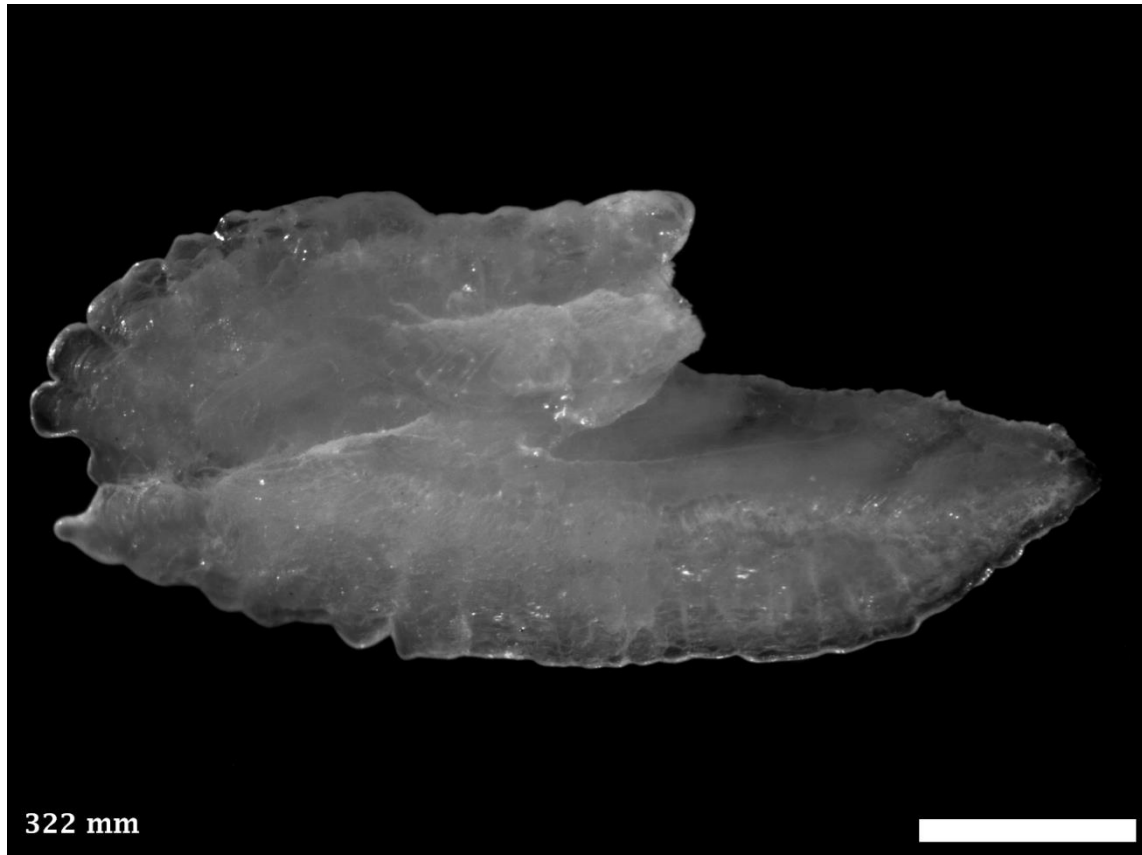


Distribution and Length: Coastal waters from Mandurah, WA north around to Sydney, NSW. 560 mm TL.



5.117 *Trachinotus botla*, Common Dart

PERCIFORMES CARANGIDAE (Trevallies)

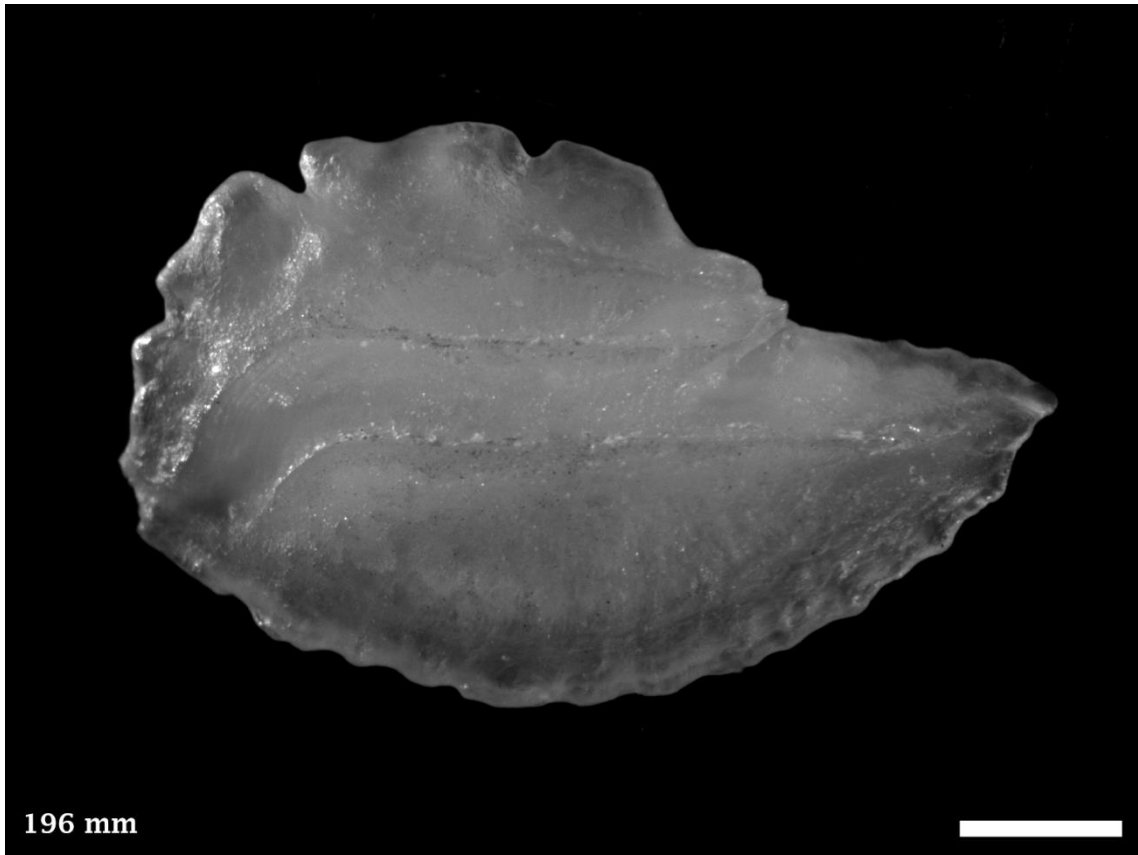


Distribution and Length: Coastal waters from Bunbury, WA north to Northern Territory. 740 mm TL.



5.118 *Trachurus declivis*, Common Jack Mackerel

PERCIFORMES CARANGIDAE (Trevallies)

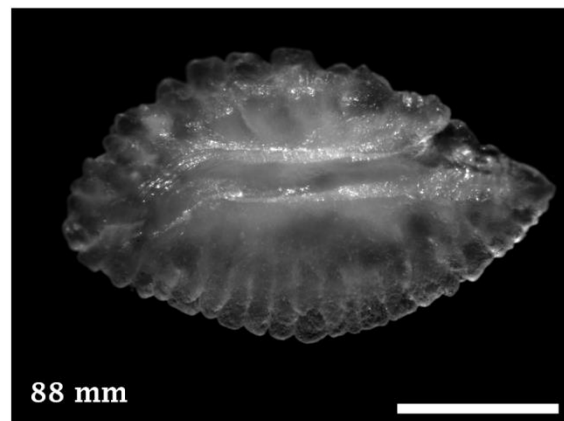
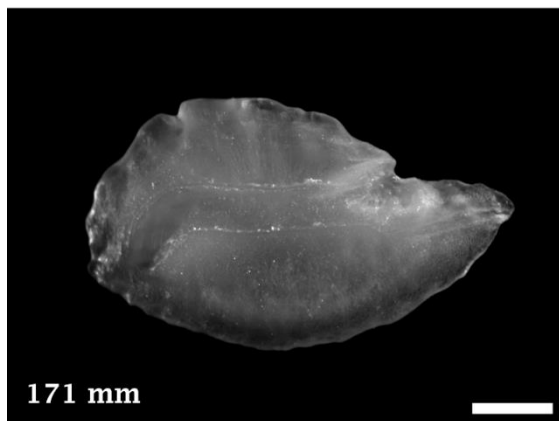
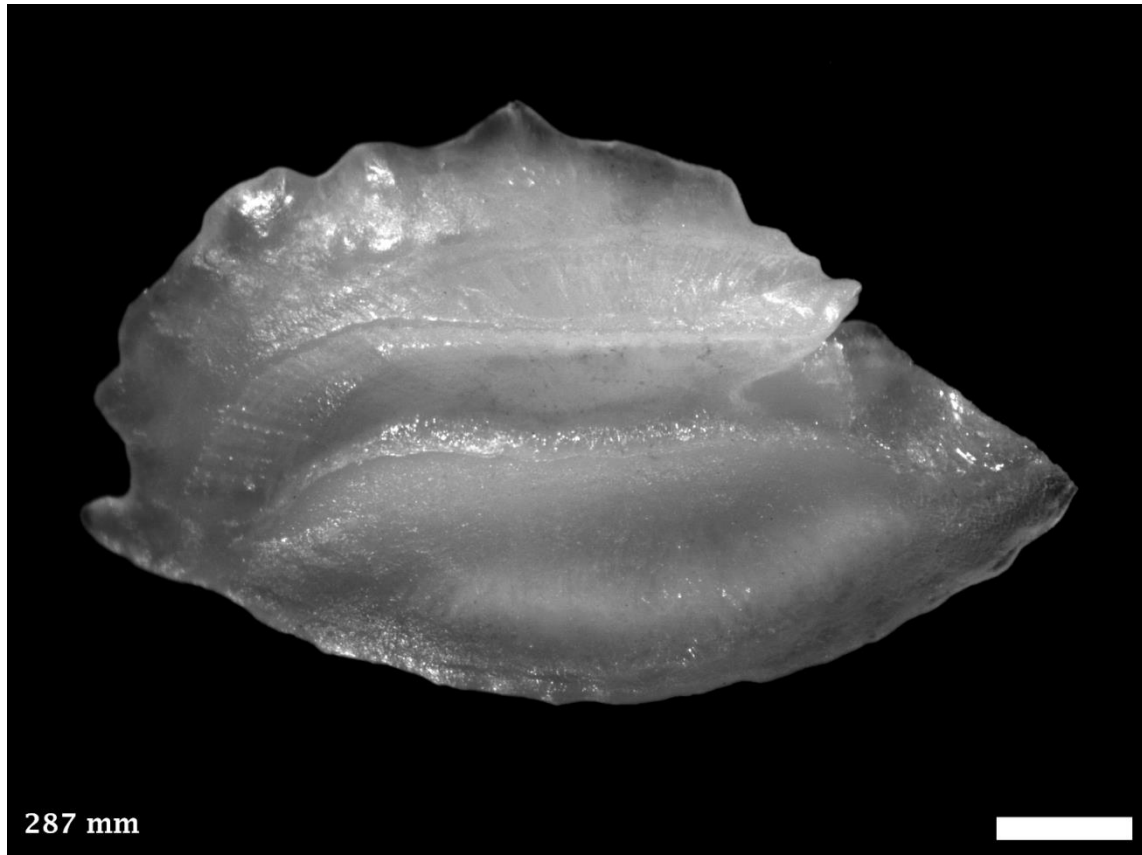


Distribution and Length: Offshore and coastal waters from Shark Bay, WA south around to southern Queensland. 570 mm TL.



5.119 *Trachurus novaezelandiae*, Yellowtail Scad

PERCIFORMES CARANGIDAE (Trevallies)

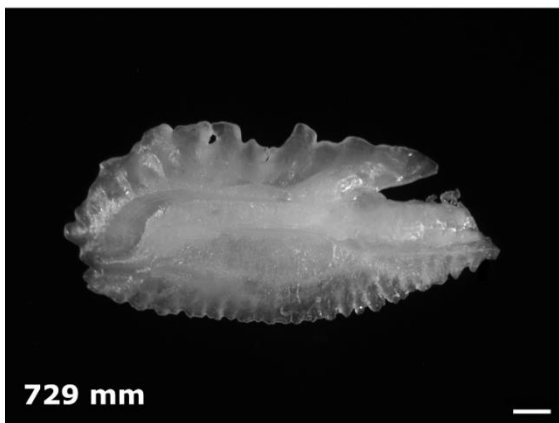
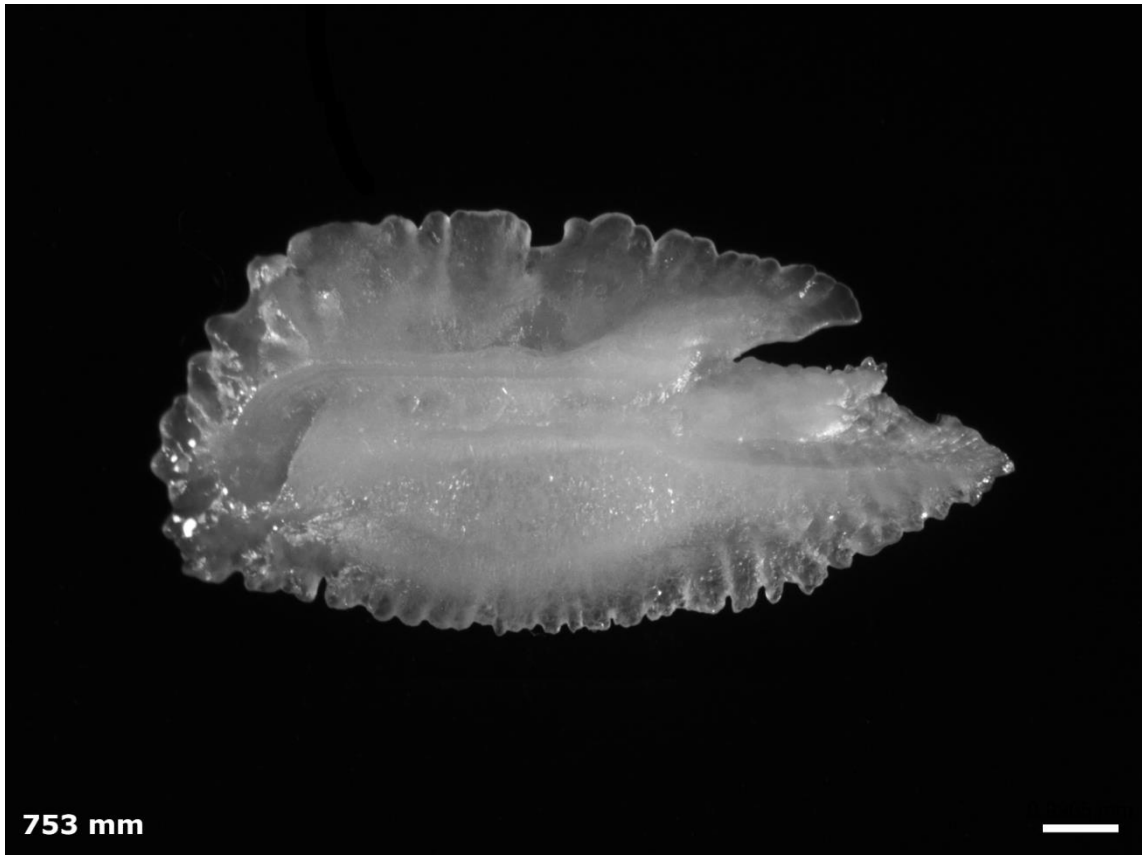


Distribution and Length: Coastal and estuarine waters from Point Quobba, WA south around to southern Queensland. 500 mm TL.



5.120 *Erythrocles schlegelii*, Japanese Rubyfish

PERCIFORMES EMMELICHTHYIDAE (Bonnetmouths)

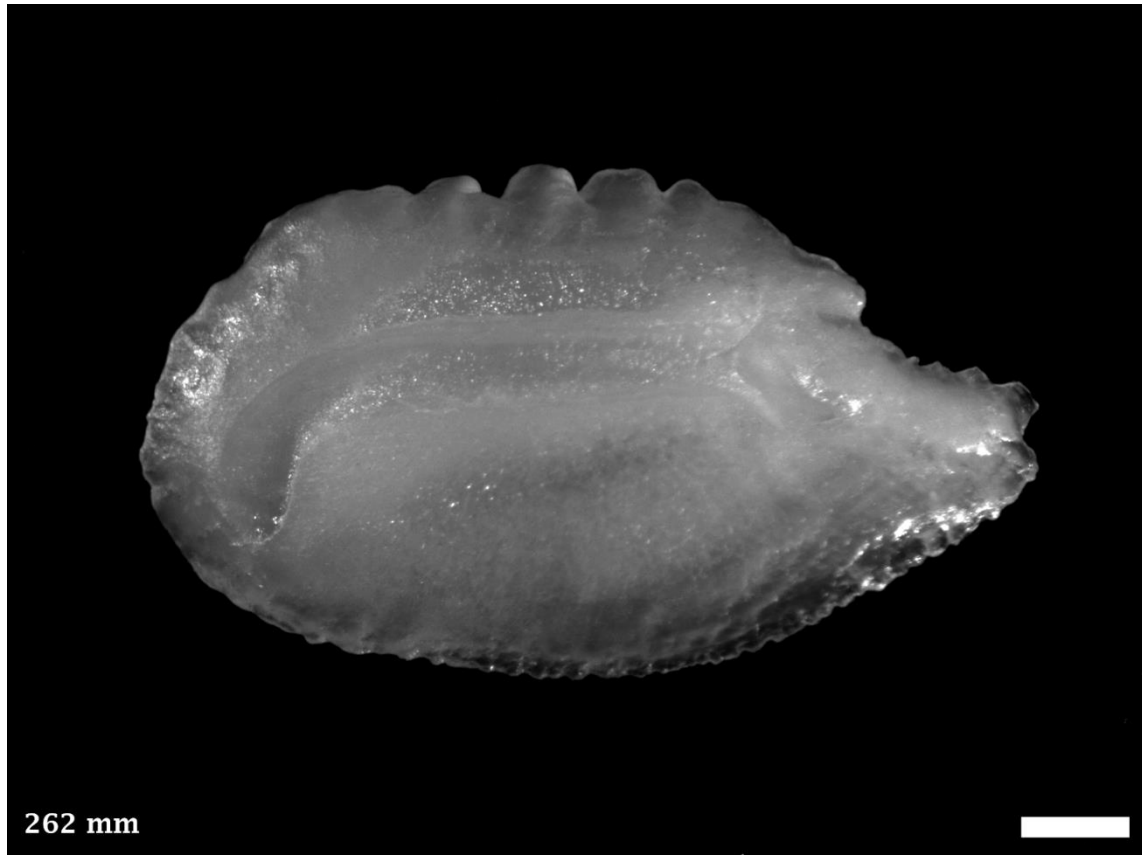


Distribution and Length: Deep waters circum-Australia. 720 mm TL.



5.121 *Plagiogeneion rubiginosum*, Cosmopolitan Rubyfish

PERCIFORMES EMMELICHTHYIDAE (Bonnetmouths)

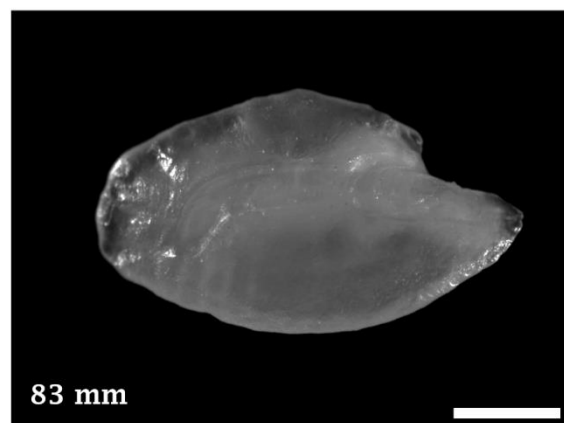
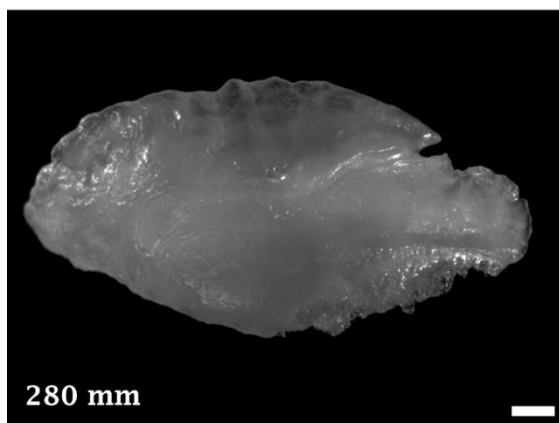
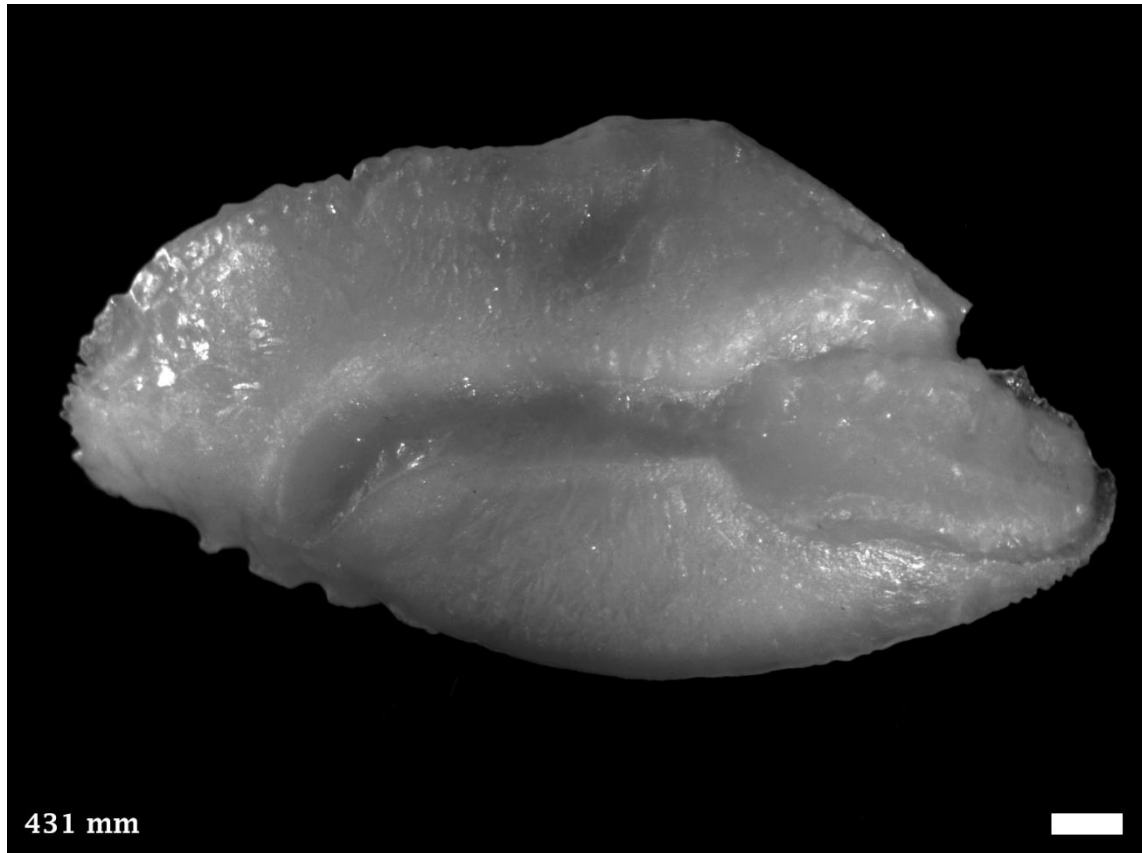


Distribution and Length: Deep offshore waters from Rottnest Island, WA south around to Byron Bay, NSW. 650 mm TL.



5.122 *Lutjanus russellii*, Moses' Snapper

PERCIFORMES LUTJANIDAE (Tropical Snappers)

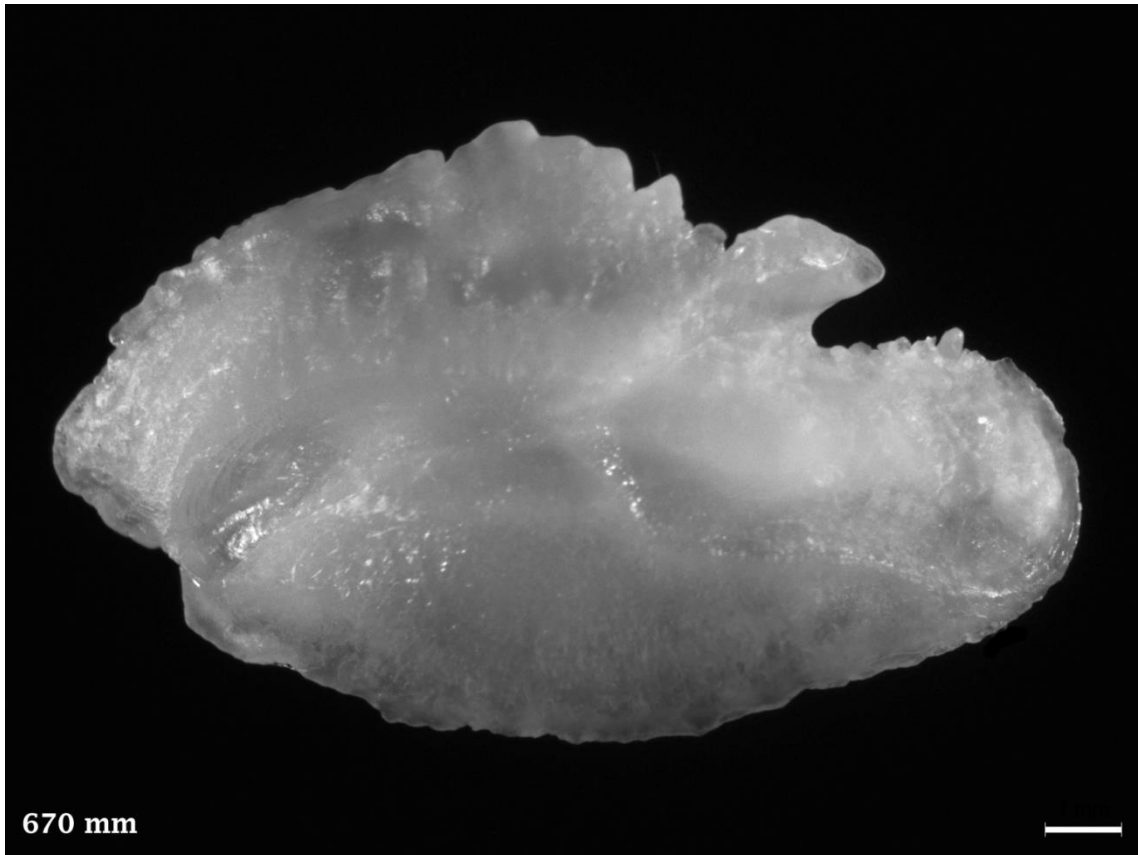


Distribution and Length: Estuaries and coastal waters from Fremantle north around to the west Pacific Ocean (Allen 1997). 450 mm TL.



5.123 *Pinjalo pinjalo*, Pinjalo

PERCIFORMES LUTJANIDAE (Tropical Snappers)



Distribution and Length: Deep offshore waters from Broome, WA south around to southern WA. 700 mm TL.

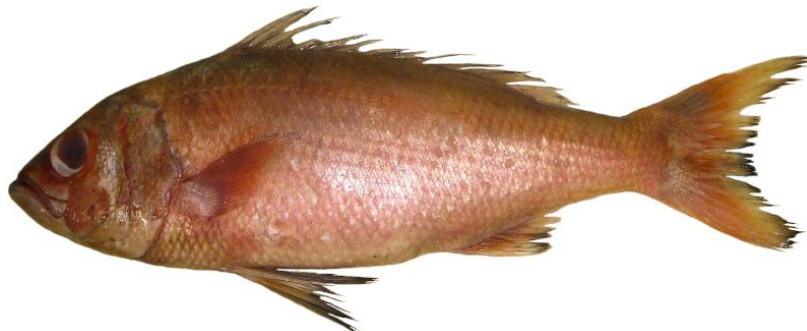


5.124 *Randallichthys filamentosus*, Randall's Snapper

PERCIFORMES LUTJANIDAE (Tropical Snappers)

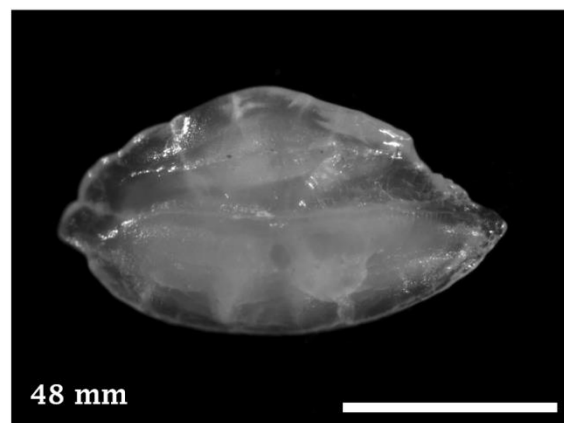
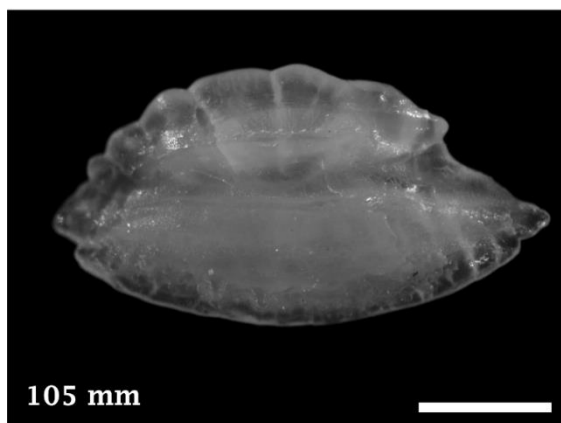
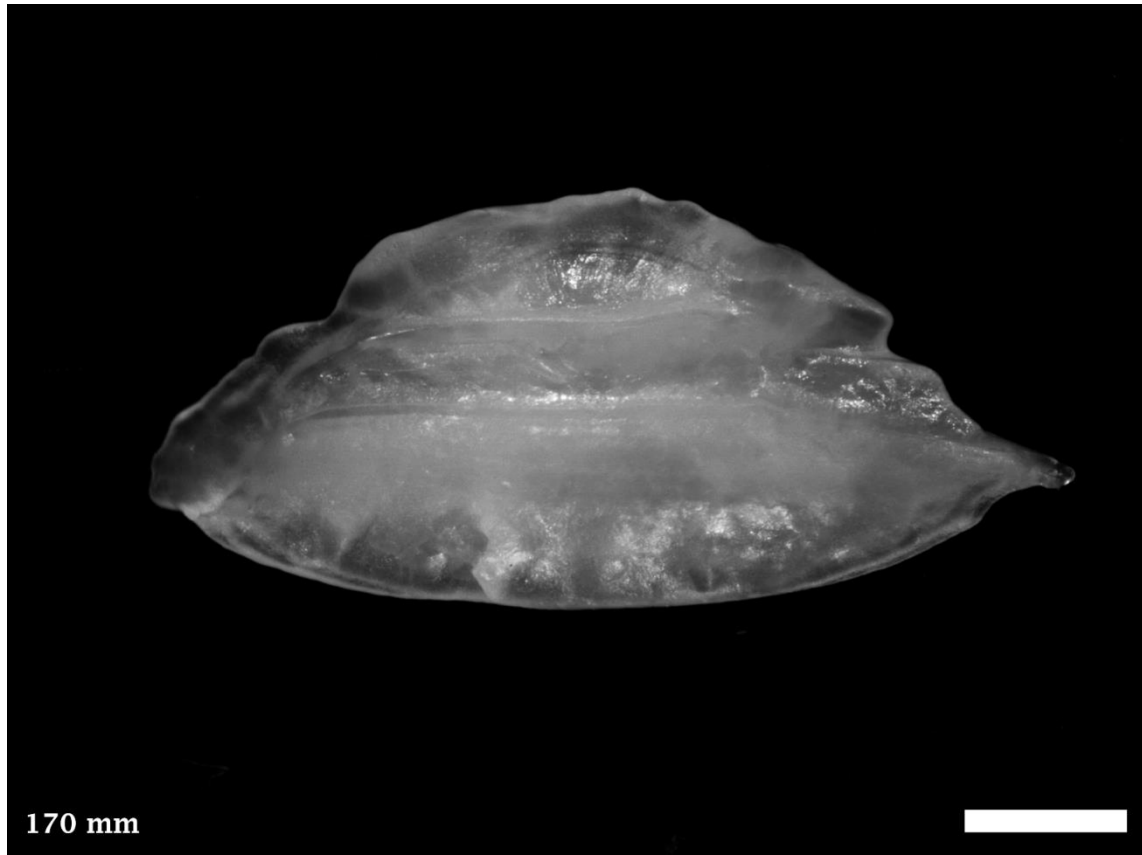


Distribution and Length: Deep offshore waters from Esperance, WA north around to the Pacific Ocean (Allen 1985). 660 mm TL.



5.125 *Gerres subfasciatus*, Common Silverbiddy

PERCIFORMES GERREIDAE (Silverbiddies)

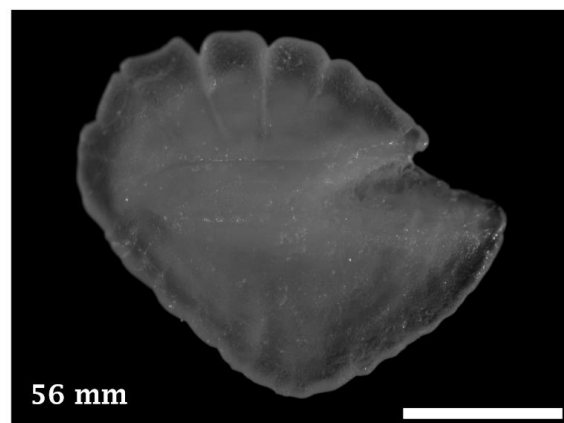
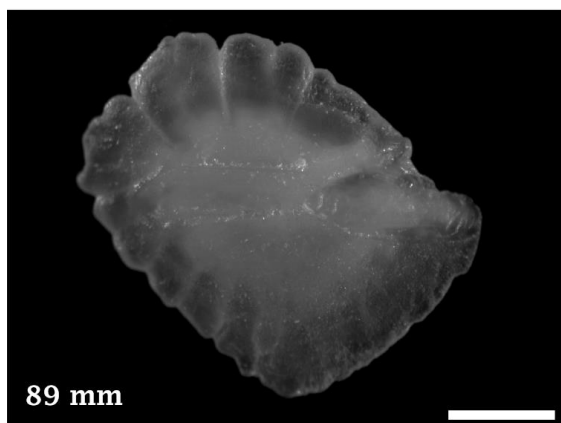
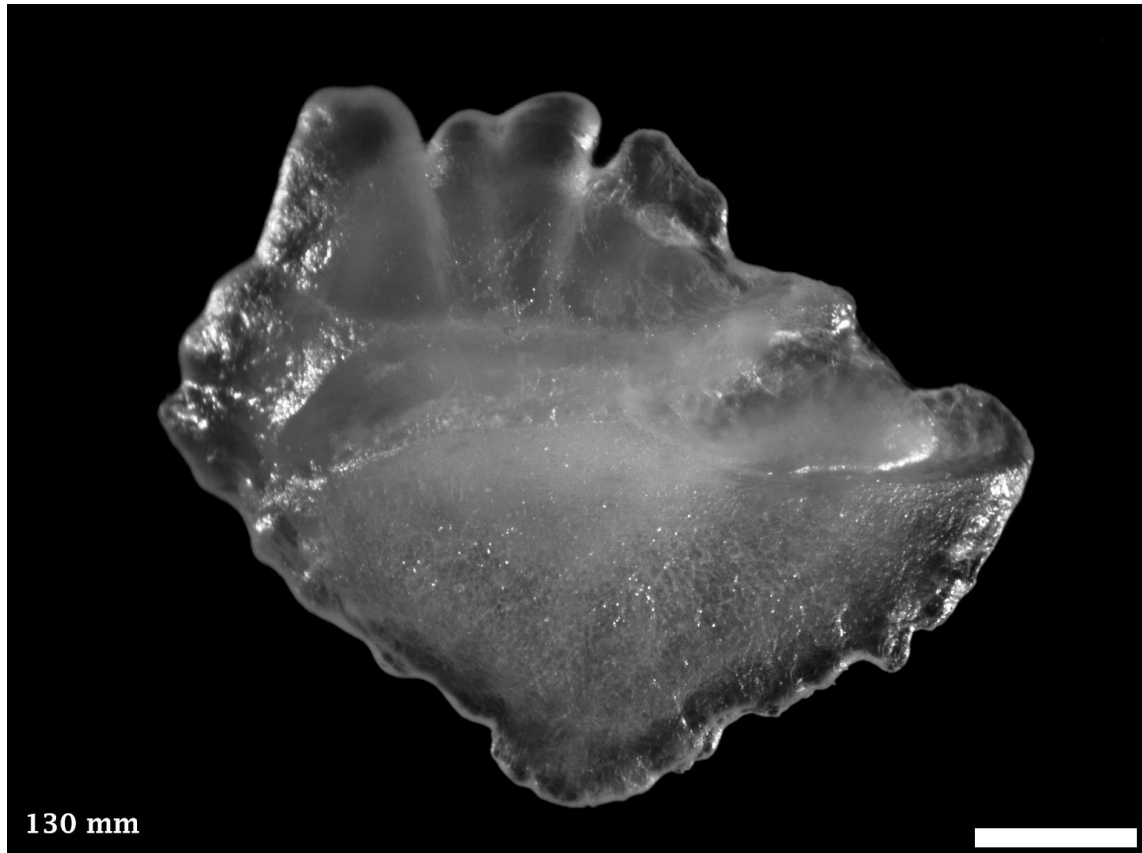


Distribution and Length: Coastal and estuarine waters from Albany, WA north around to Port Hacking, NSW. 230 mm TL.



5.126 *Parequula melbournensis*, Silverbelly

PERCIFORMES GERREIDAE (Silverbiddies)

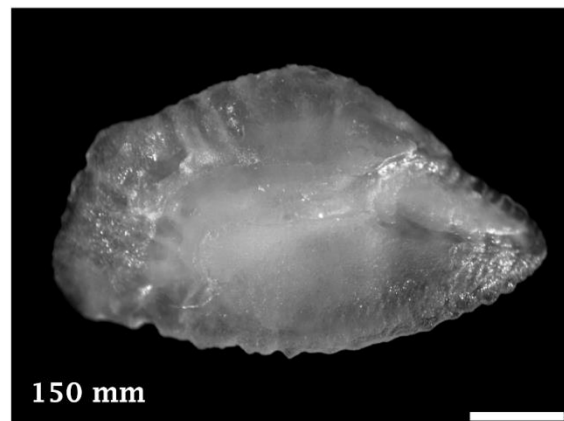
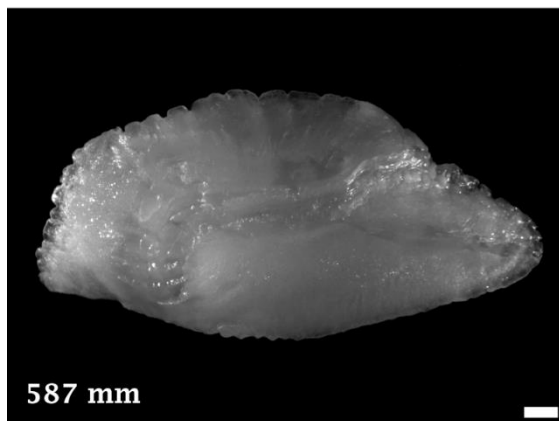
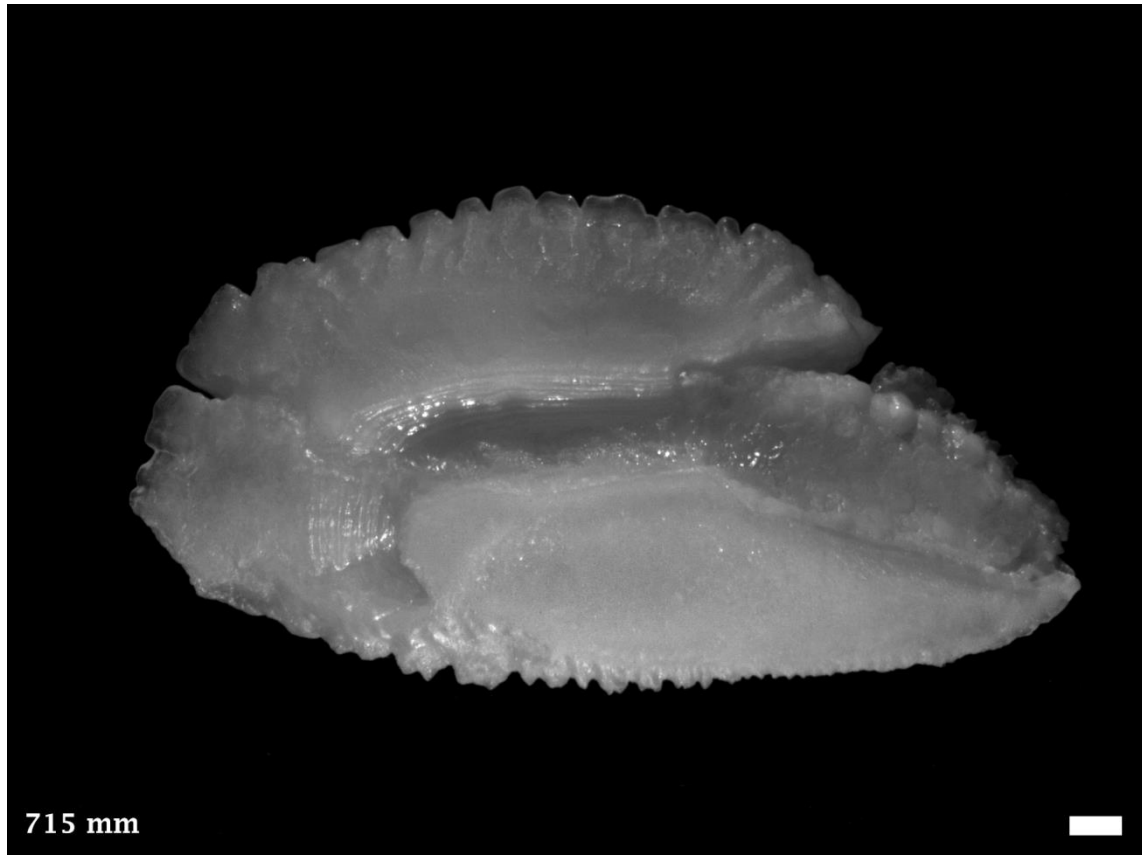


Distribution and Length: Coastal waters from Fremantle, WA south around to Victoria and Tasmania. 220 mm TL.



5.127 *Diagramma pictum*, Painted Sweetlips

PERCIFORMES HAEMULIDAE (Grunter Breams)

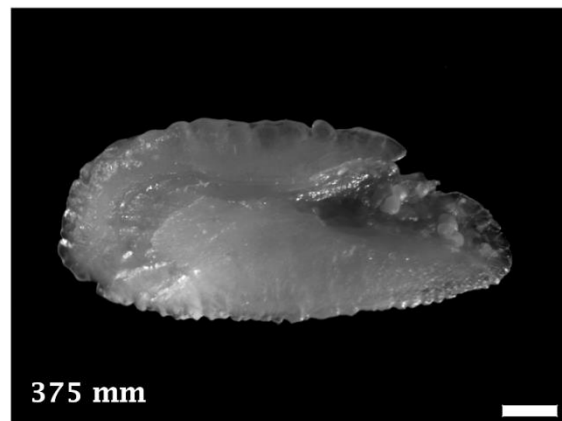
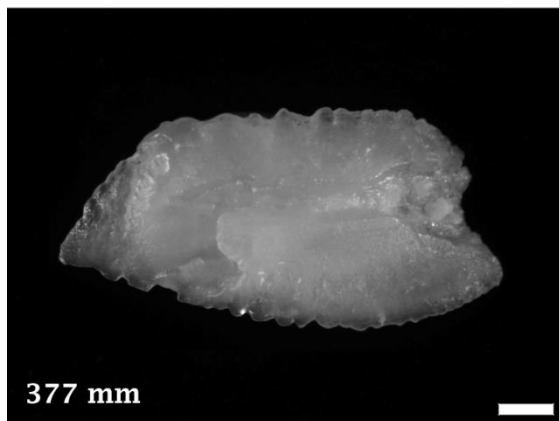
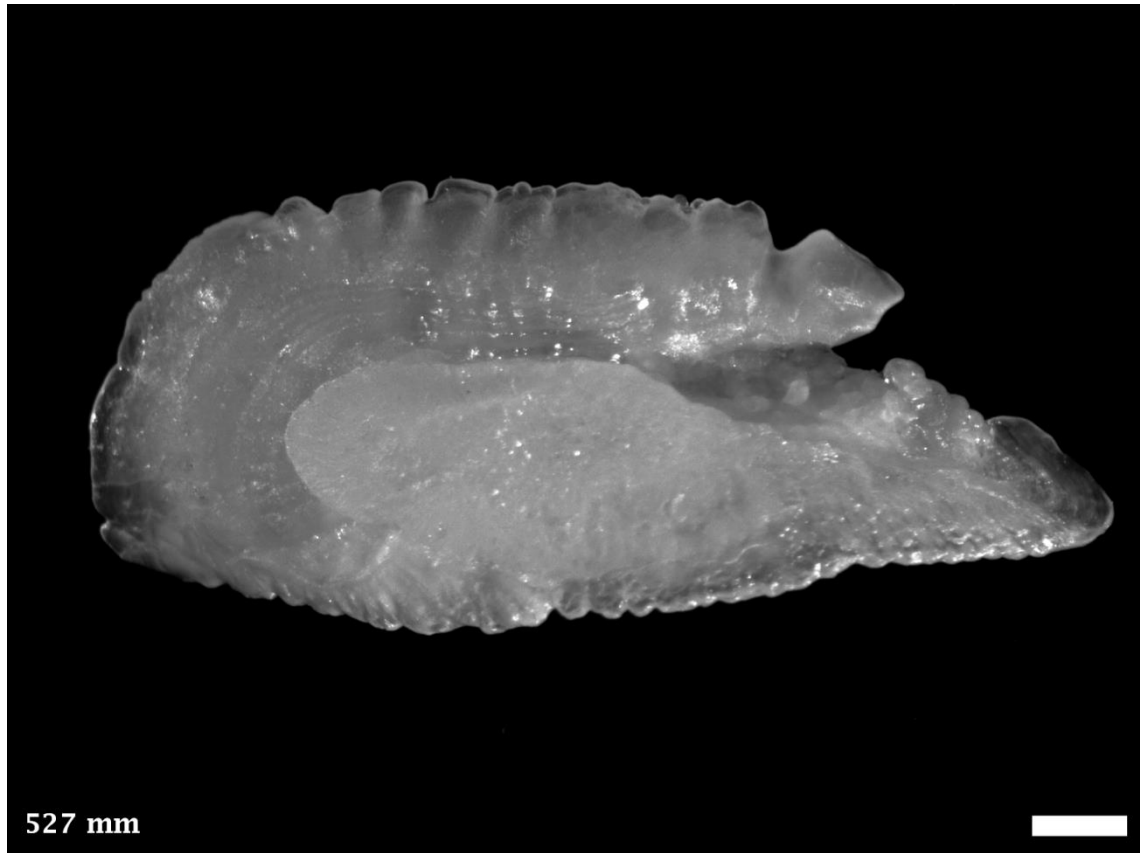


Distribution and Length: Coastal reefs from Cape Nauraliste, WA north around to the West Pacific Ocean (Allen 1997). 900 mm TL.



5.128 *Plectorhinchus flavomaculatus*, Goldspotted Sweetlips

PERCIFORMES HAEMULIDAE (Grunter Breams)

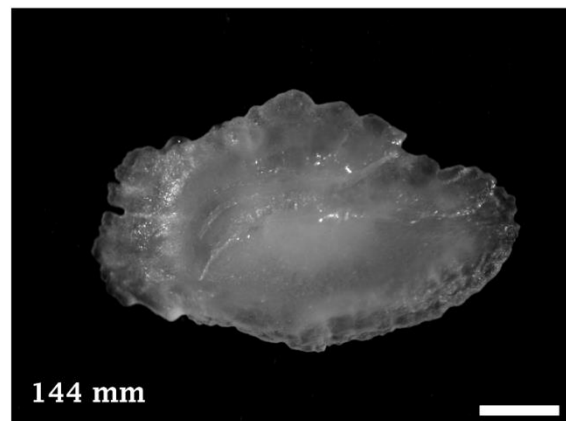
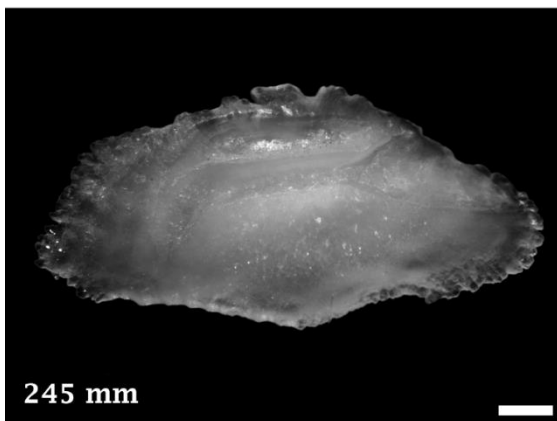
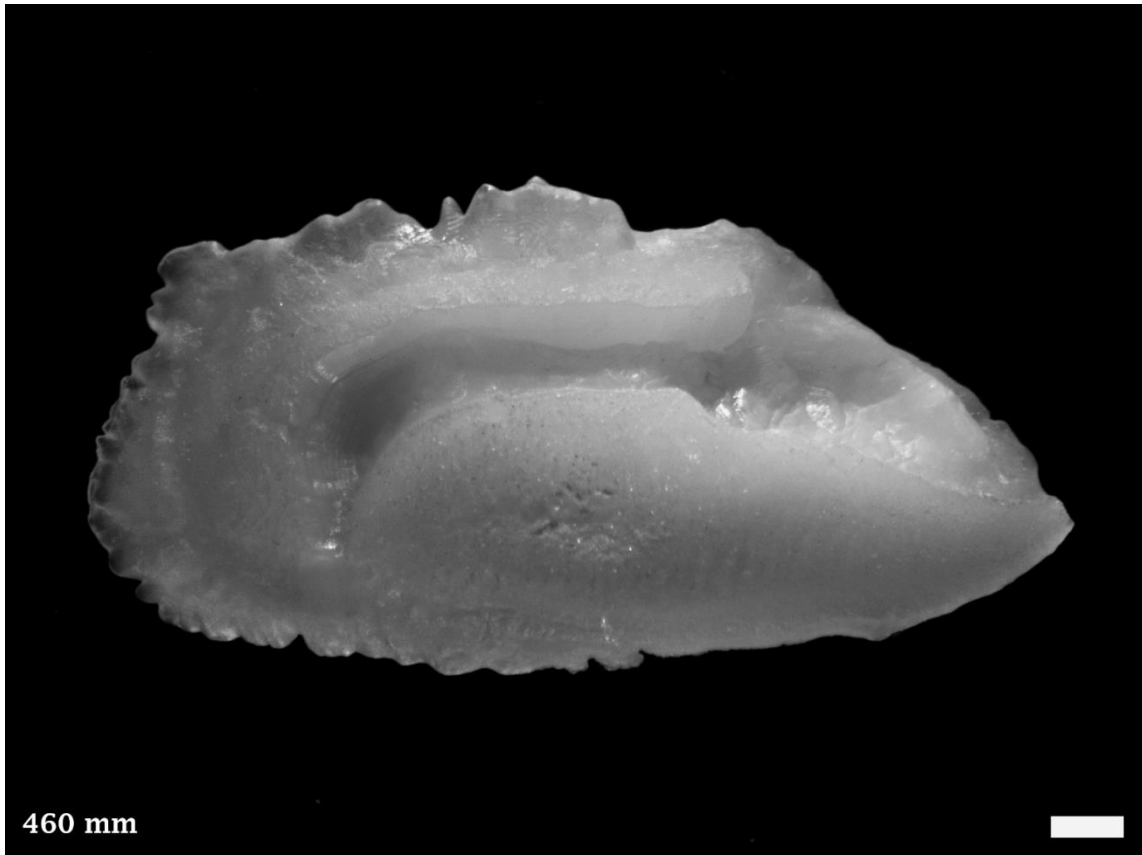


Distribution and Length: Protected reefs and coastal waters from Geographe Bay, WA north around to Moruya, NSW. 620 mm TL.



5.129 *Acanthopagrus butcheri*, Black Bream

PERCIFORMES SPARIDAE (Breams)

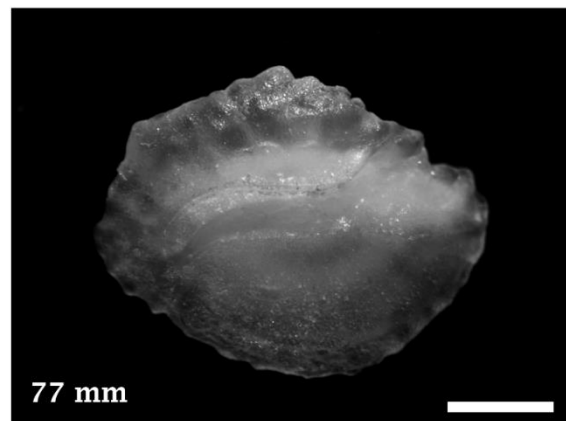
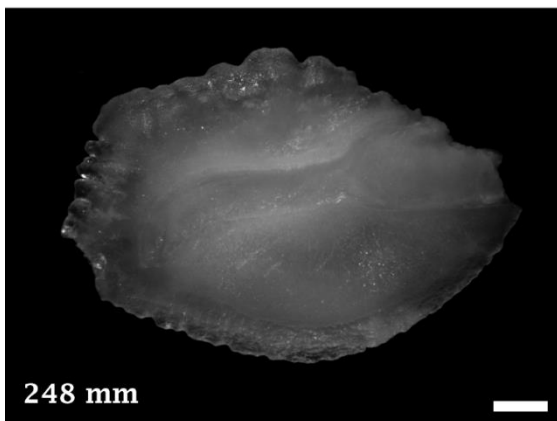
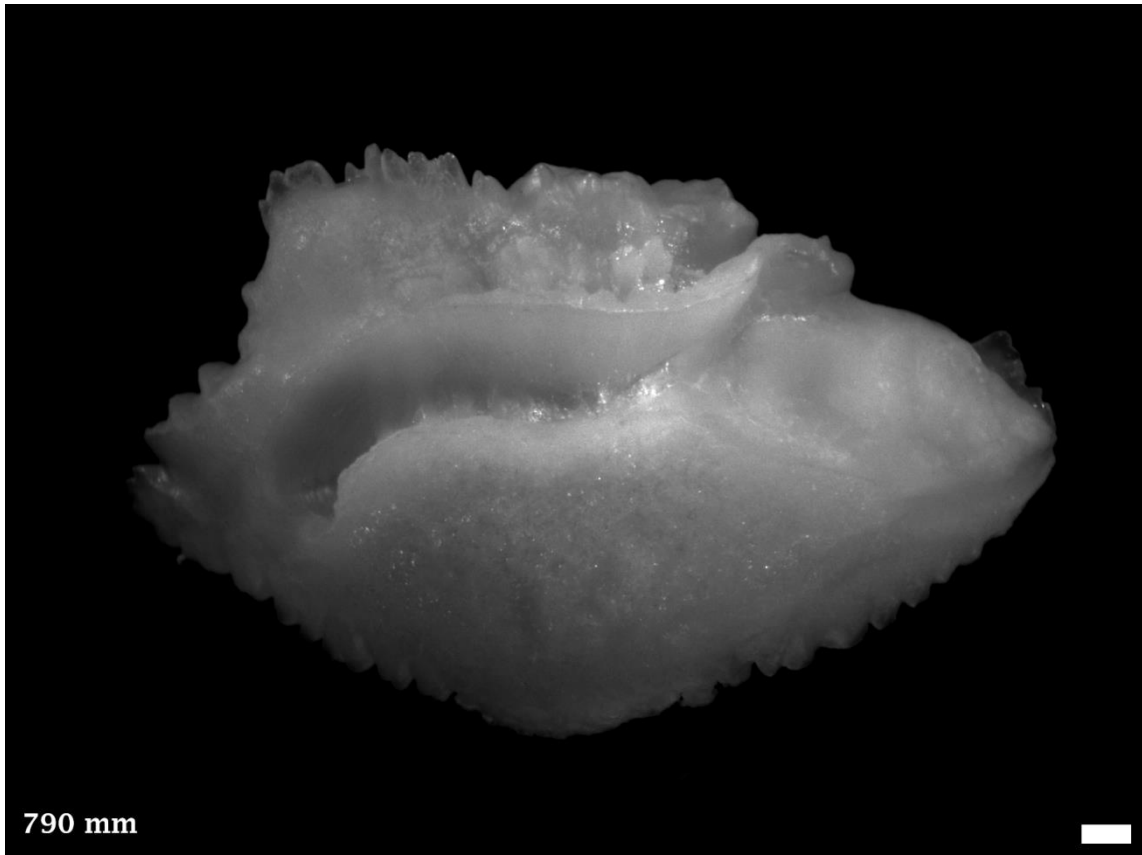


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south around to southern NSW, including Tasmania. 550 mm TL.



5.130 *Chrysophrys auratus*, Snapper

PERCIFORMES SPARIDAE (Breams)

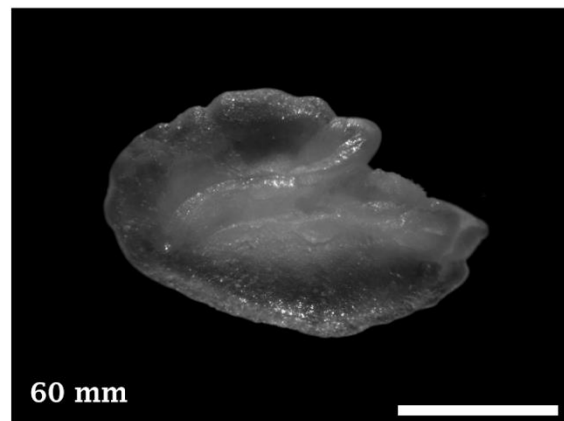
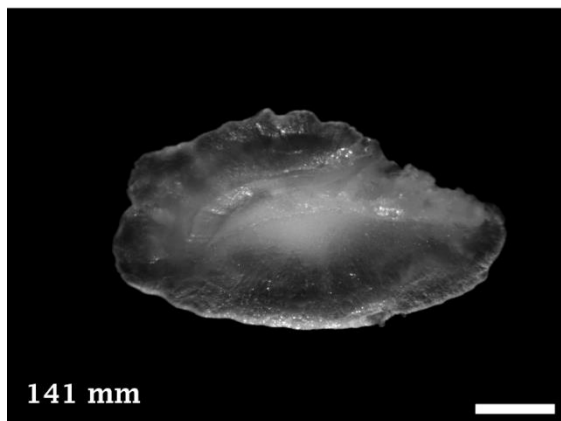
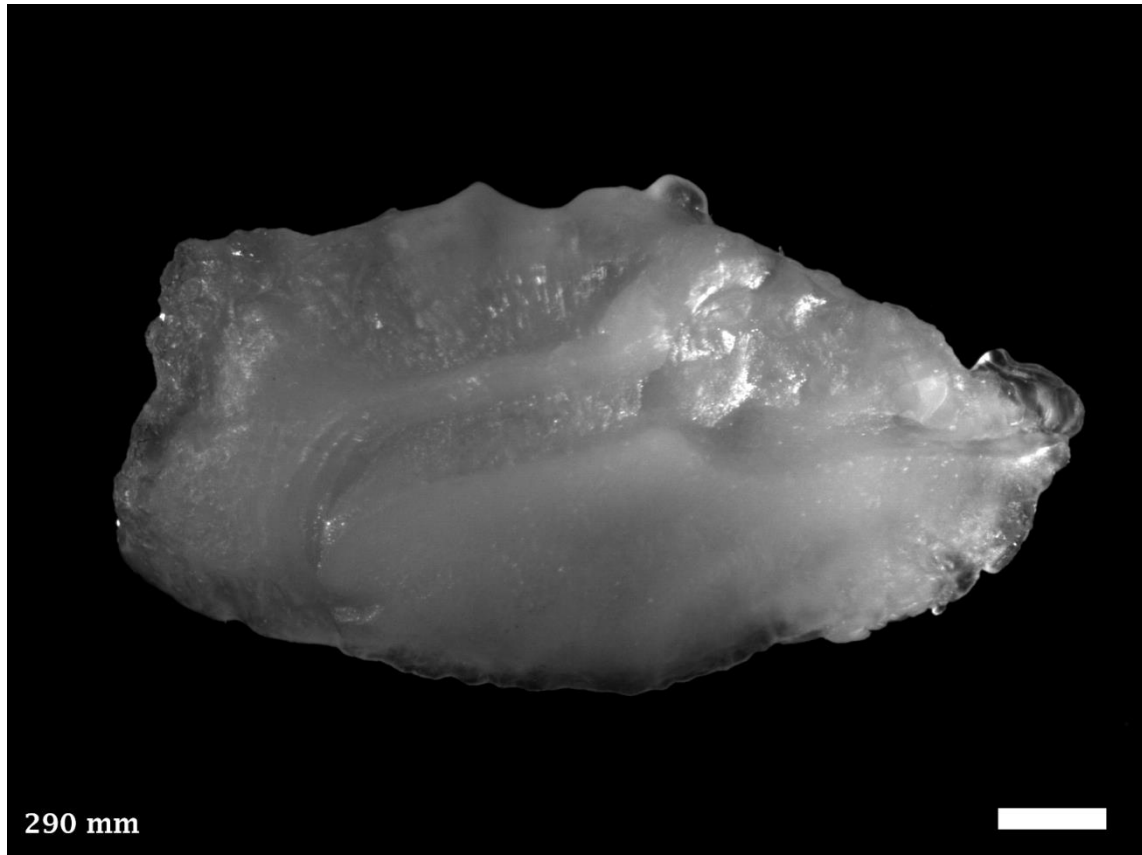


Distribution and Length: Offshore, coastal and estuarine waters from Coral Bay, WA south around to Capricorn Group, Qld, including Tasmania. 1300 mm TL.



5.131 *Rhabdosargus sarba*, Tarwhine

PERCIFORMES SPARIDAE (Breams)

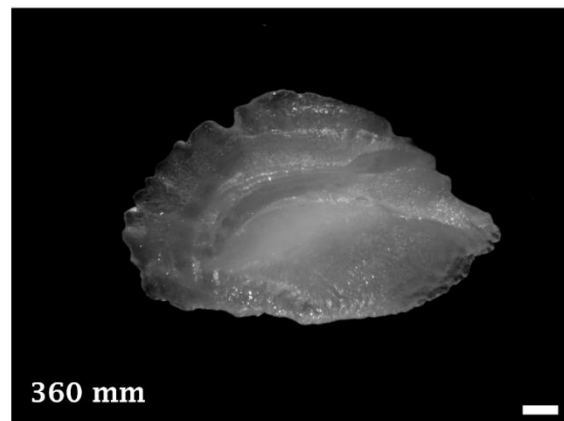
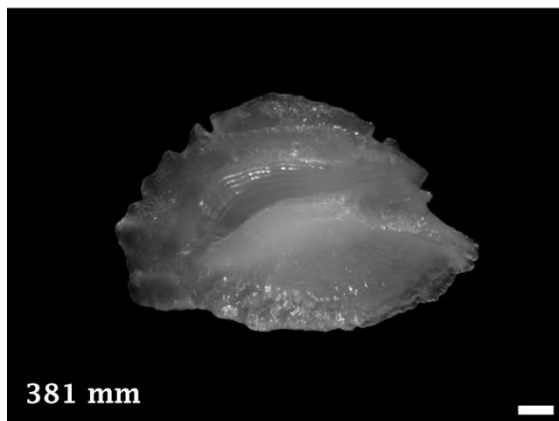
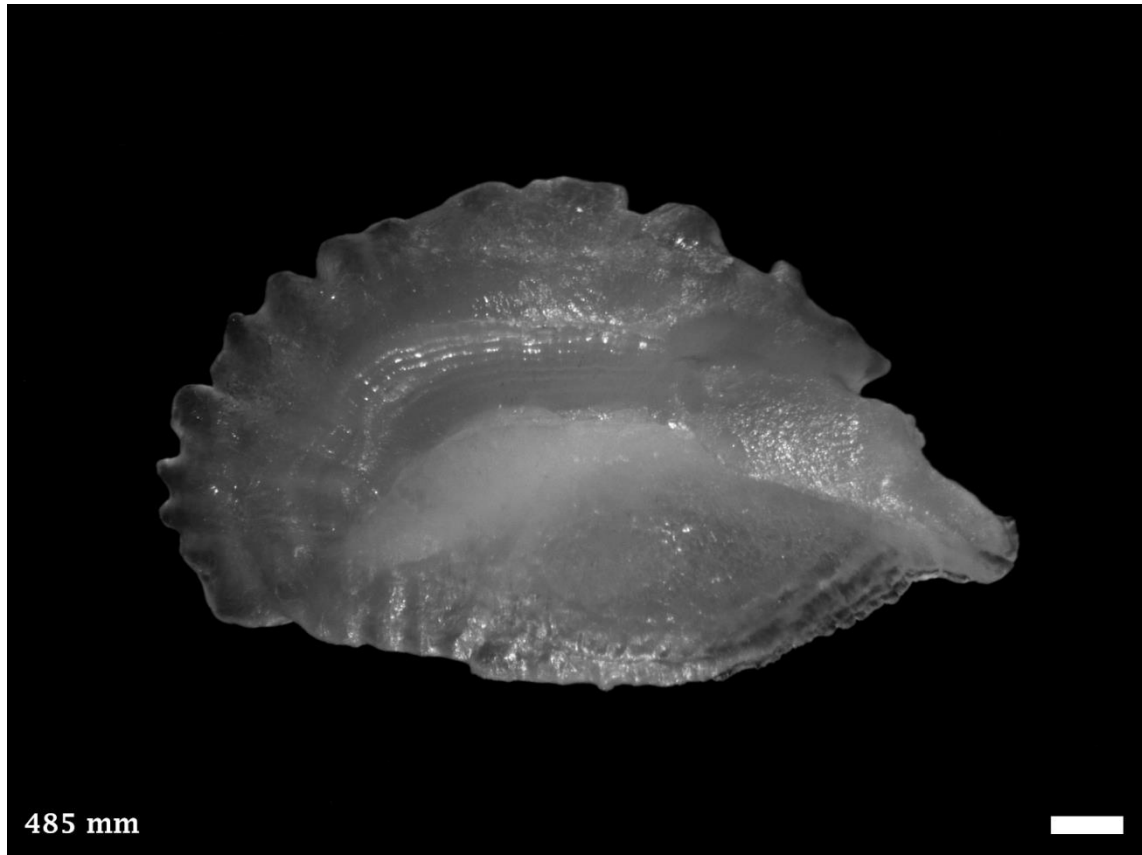


Distribution and Length: Coastal and estuarine waters from Coral Bay, WA south to Albany, WA. 500 mm TL.



5.132 *Lethrinus miniatus*, Redthroat Emperor

PERCIFORMES LETHRINIDAE (Emperors)

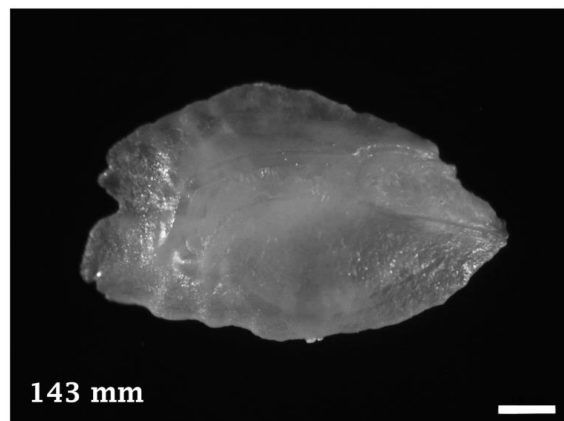
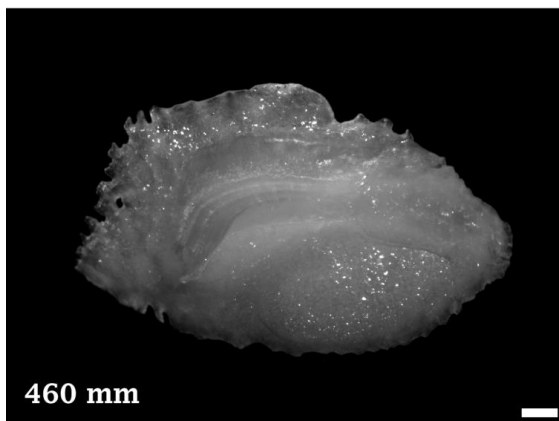
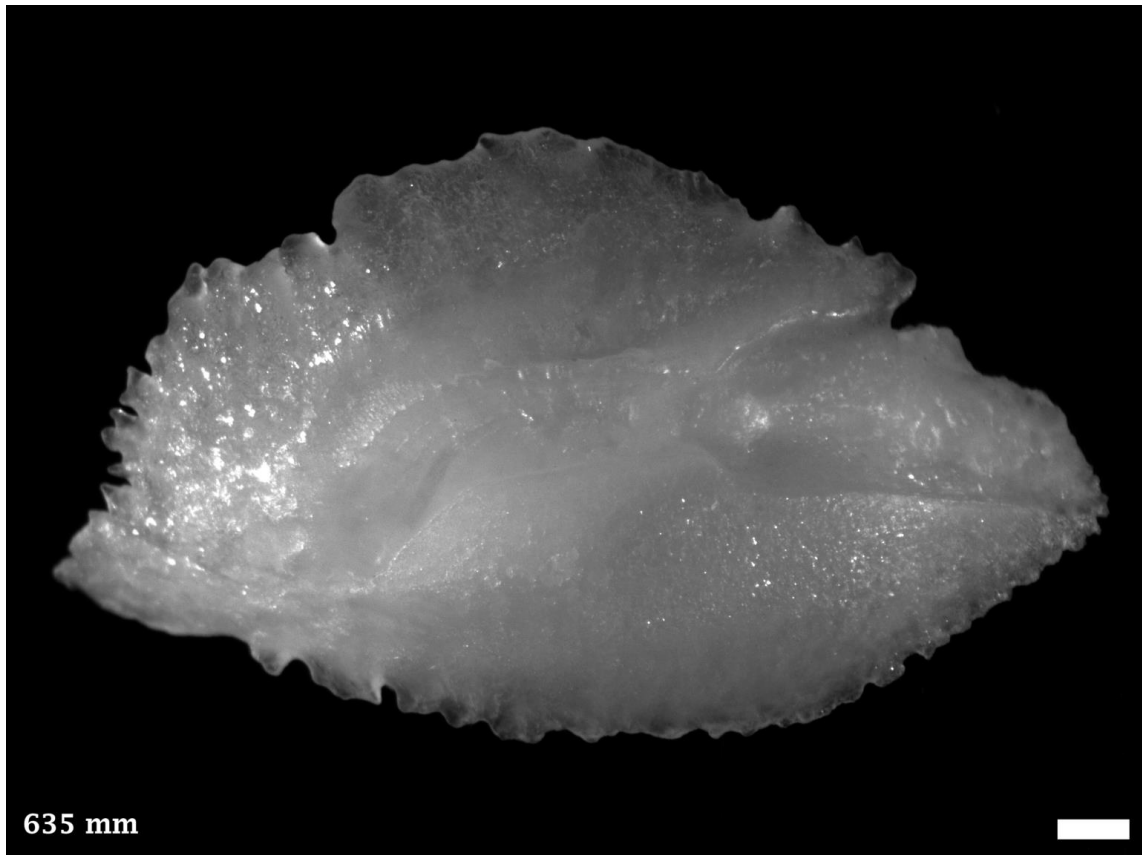


Distribution and Length: Coastal waters from Rottnest Island, WA north around to southern NSW. 900 mm TL.



5.133 *Lethrinus nebulosus*, Spangled Emperor

PERCIFORMES LETHRINIDAE (Emperors)

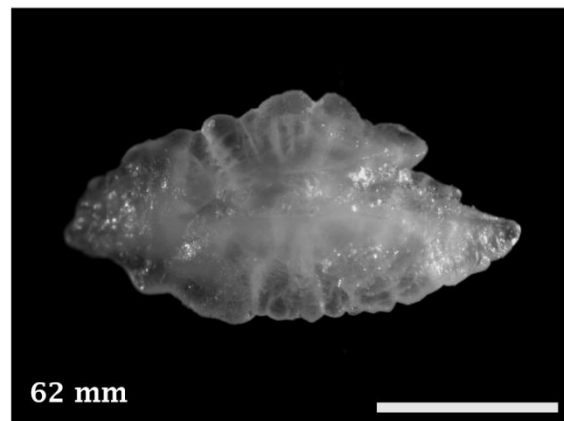
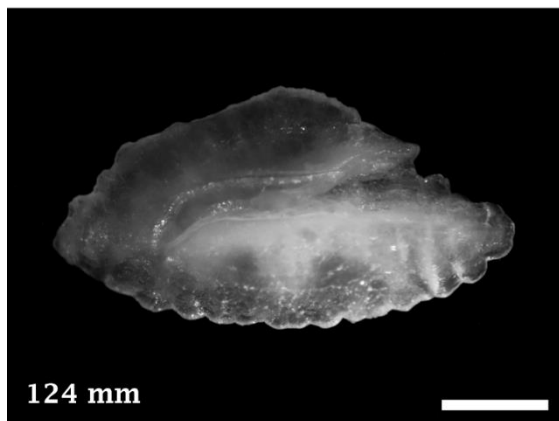
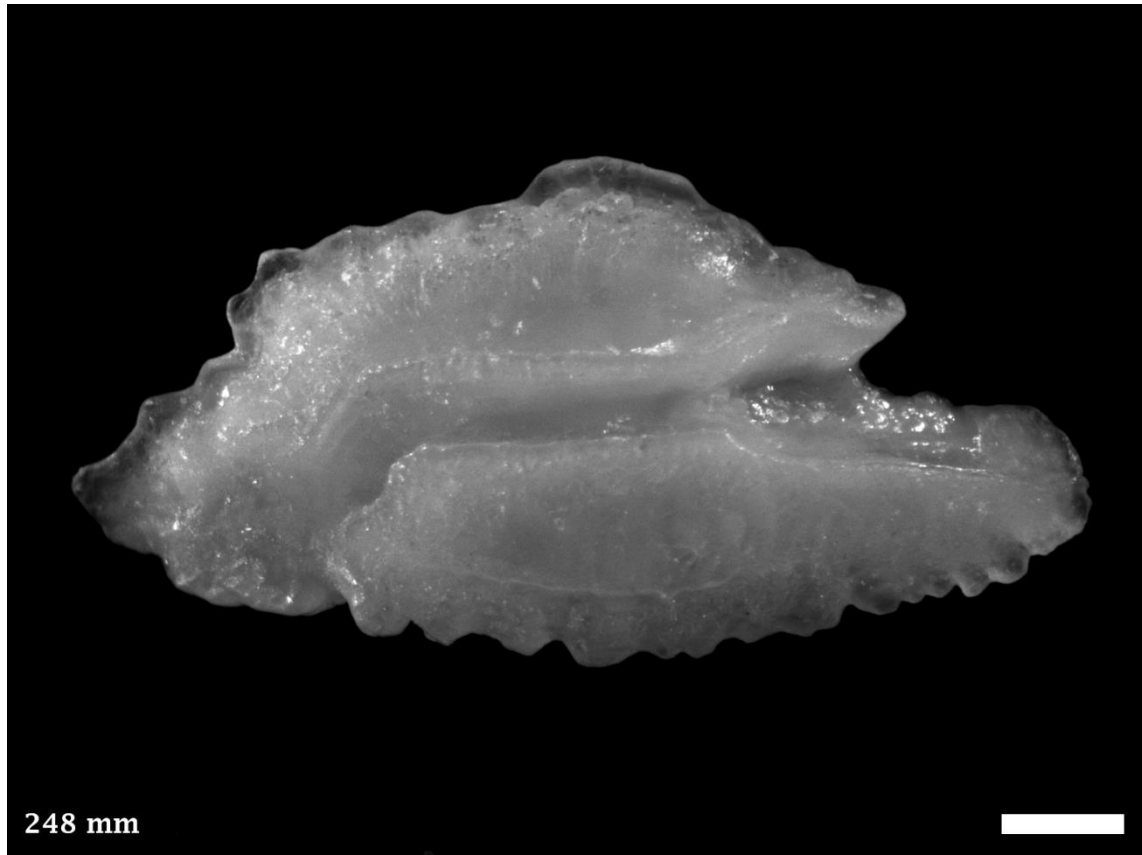


Distribution and Length: Coastal waters from Rottnest Island, WA north around to Sydney, NSW. 860 mm TL.



5.134 *Pentapodus vitta*, Western Butterfish

PERCIFORMES NEMIPTERIDAE (Threadfin Breams)

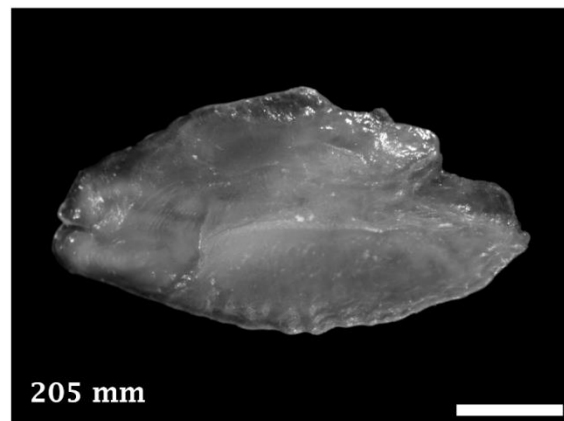
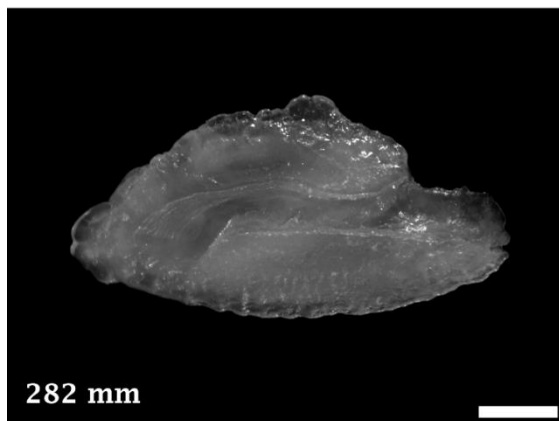
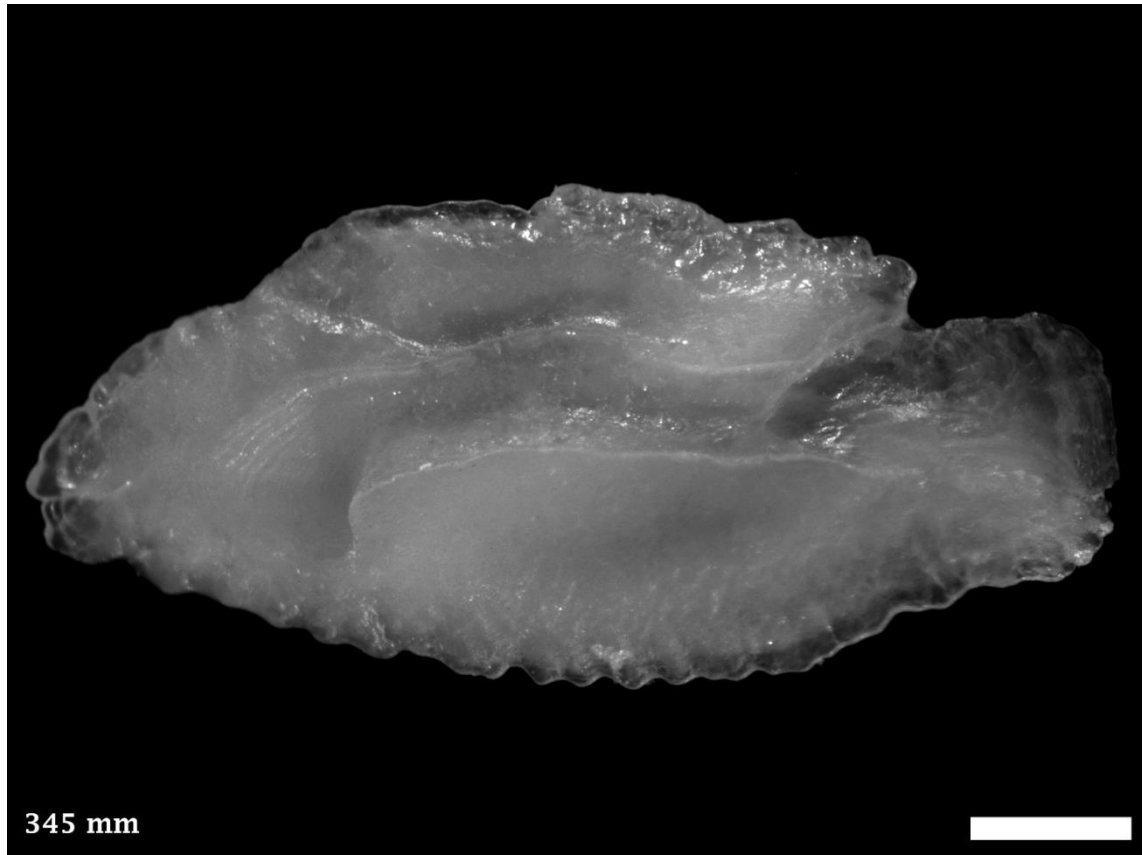


Distribution and Length: Coastal waters from Dampier Archipelago, WA south to Geographe Bay, WA. 310 mm TL.



5.135 *Polydactylus plebius*, Striped Threadfin

PERCIFORMES POLYNEMIDAE (Threadfin Salmons)

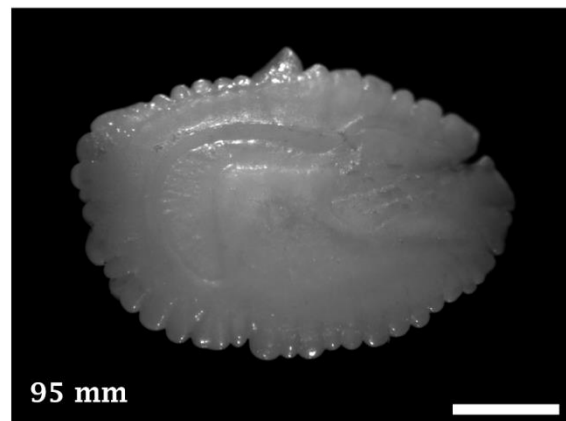
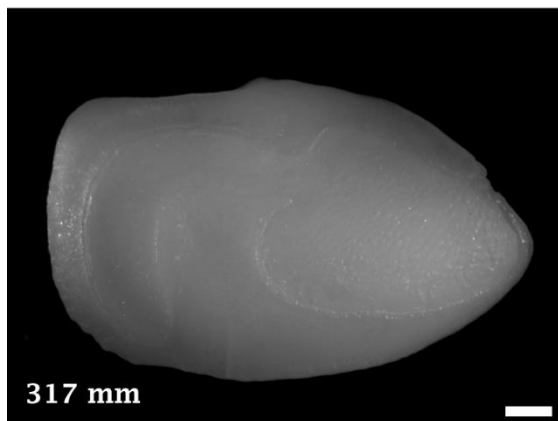
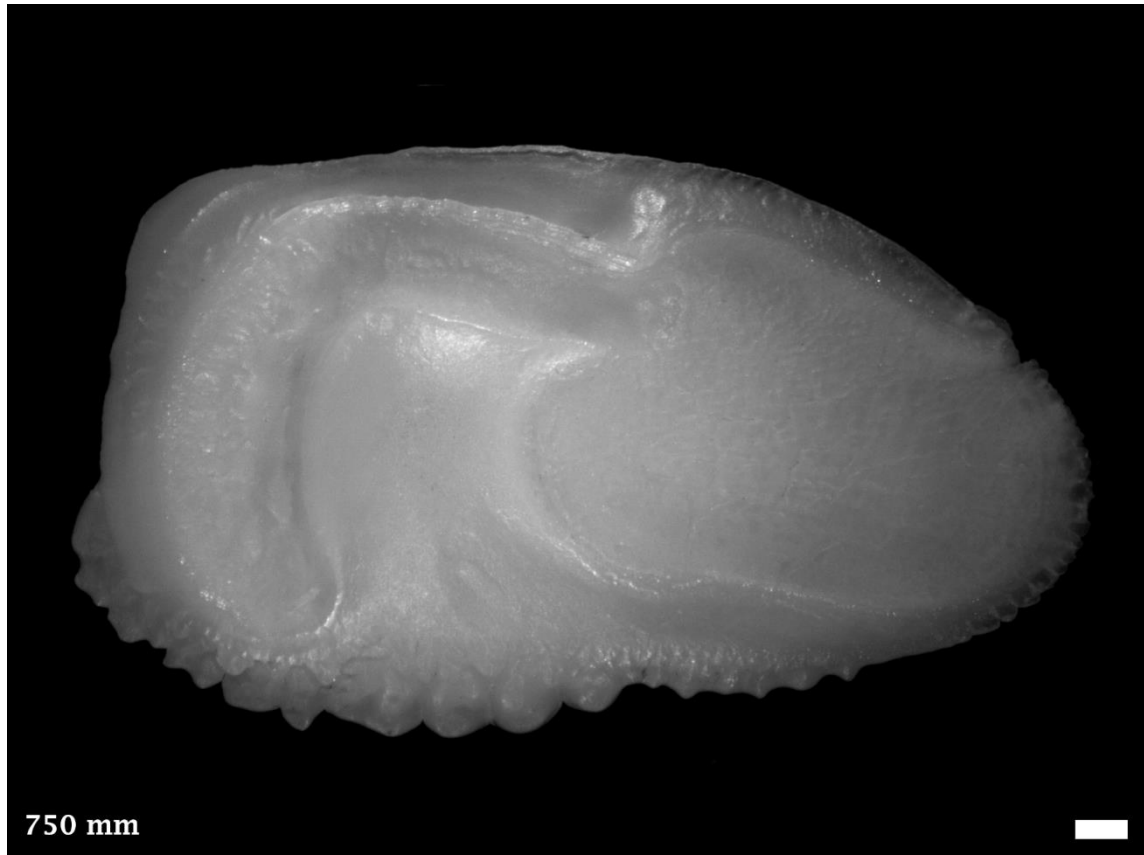


Distribution and Length: Coastal waters from Hamelin Bay, WA north to Indo-Central Pacific Ocean. 450 mm TL.



5.136 *Argyrosomus japonicus*, Mulloway

PERCIFORMES SCIAENIDAE (Jewfishes)

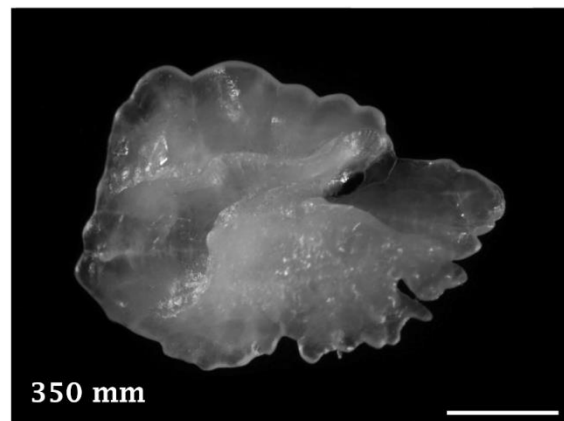
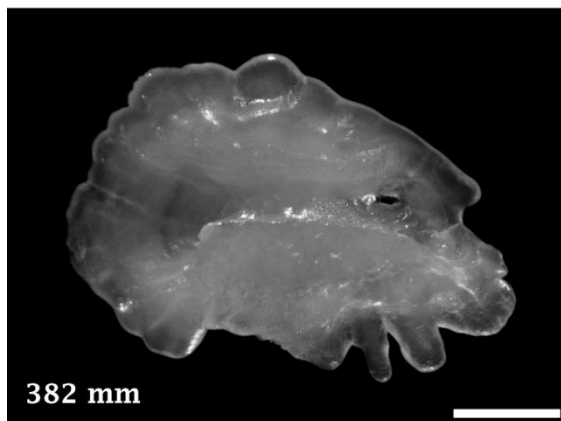
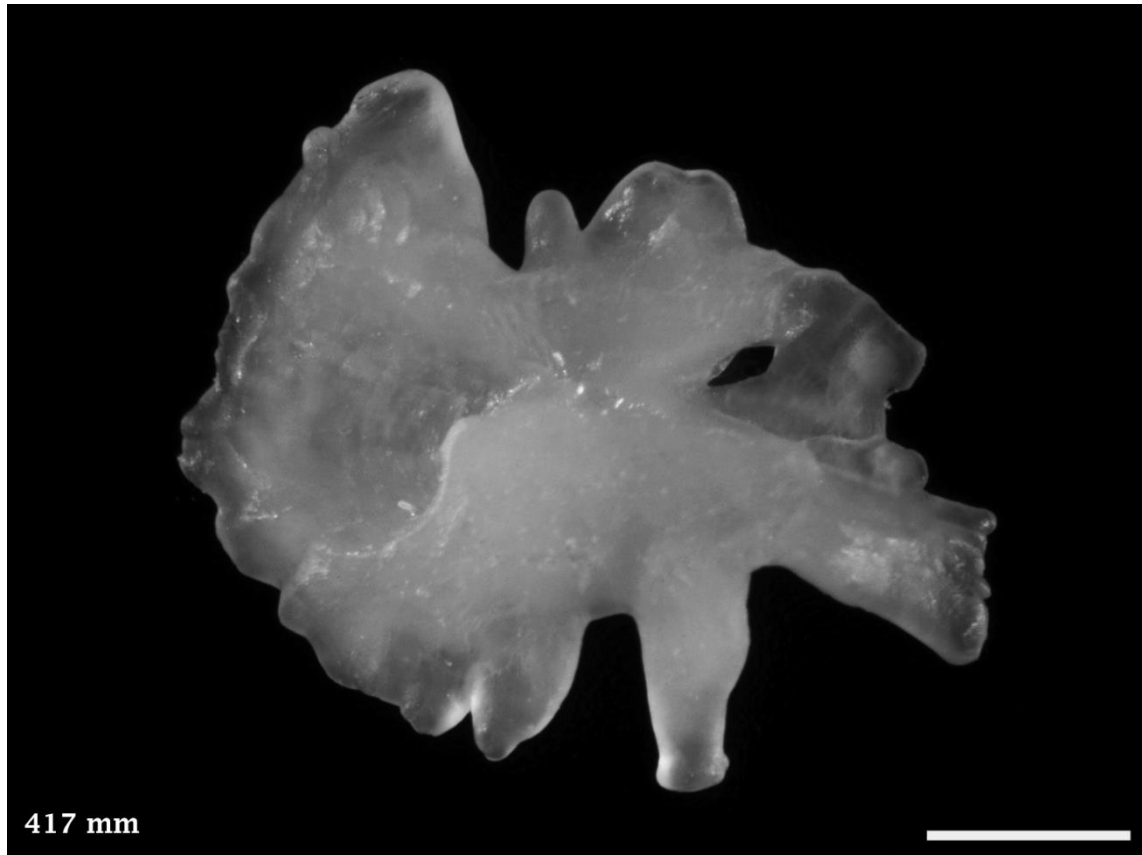


Distribution and Length: Coastal and estuarine waters from Exmouth Gulf, WA south around to southern Queensland. 2000 mm TL.



5.137 *Parupeneus spilurus*, Blacksaddle Goatfish

PERCIFORMES MULLIDAE (Goatfishes)

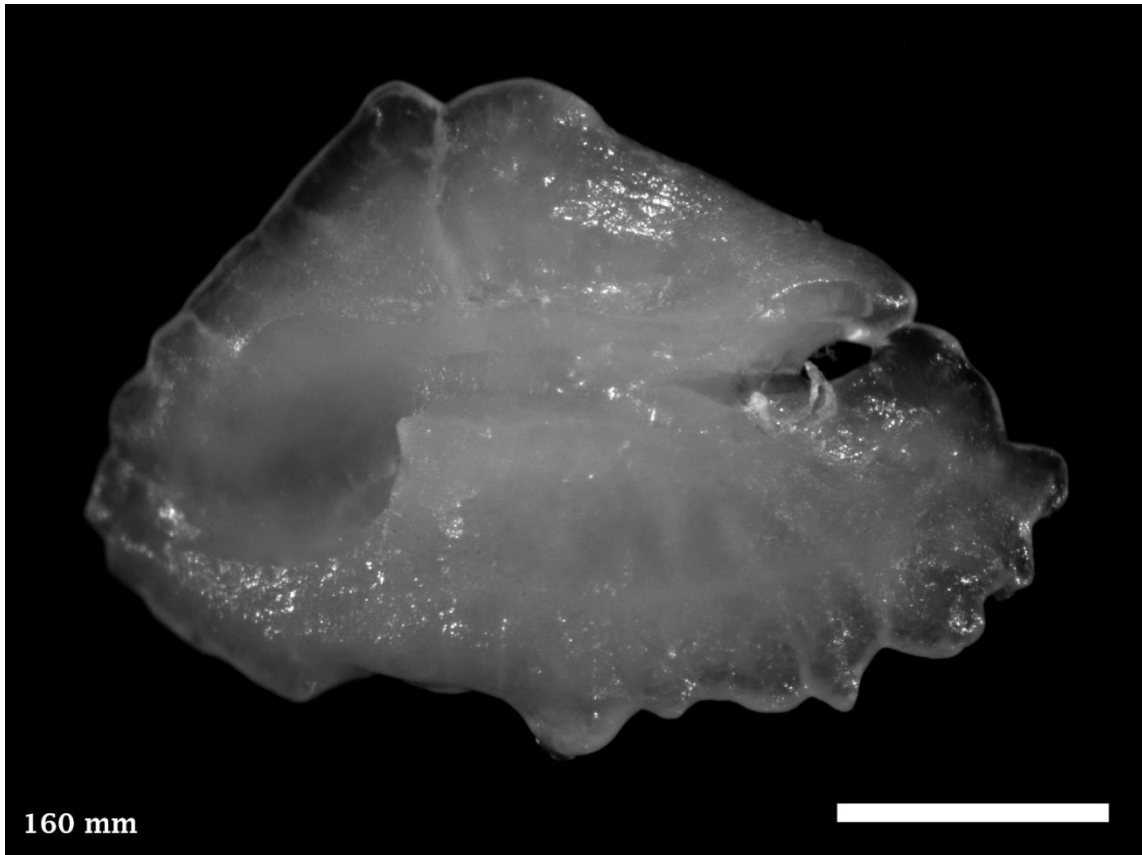


Distribution and Length: Coastal waters and reefs from Geographe Bay, WA north around to Mallacoota Inlet, Victoria. 470 mm TL.



5.138 *Upeneichthys stotti*, Stott's Goatfish

PERCIFORMES MULLIDAE (Goatfishes)

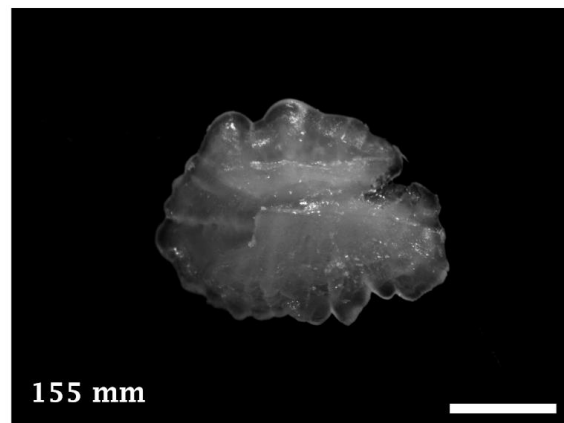
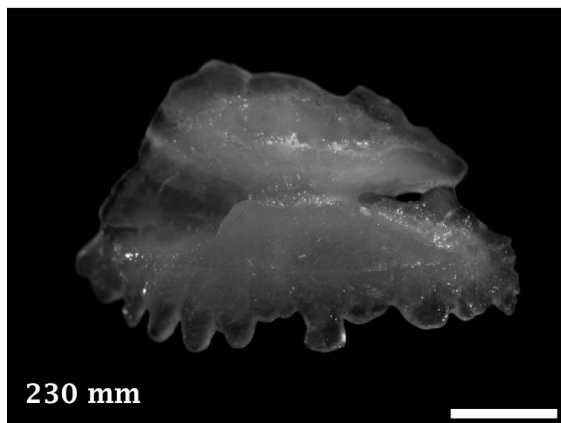
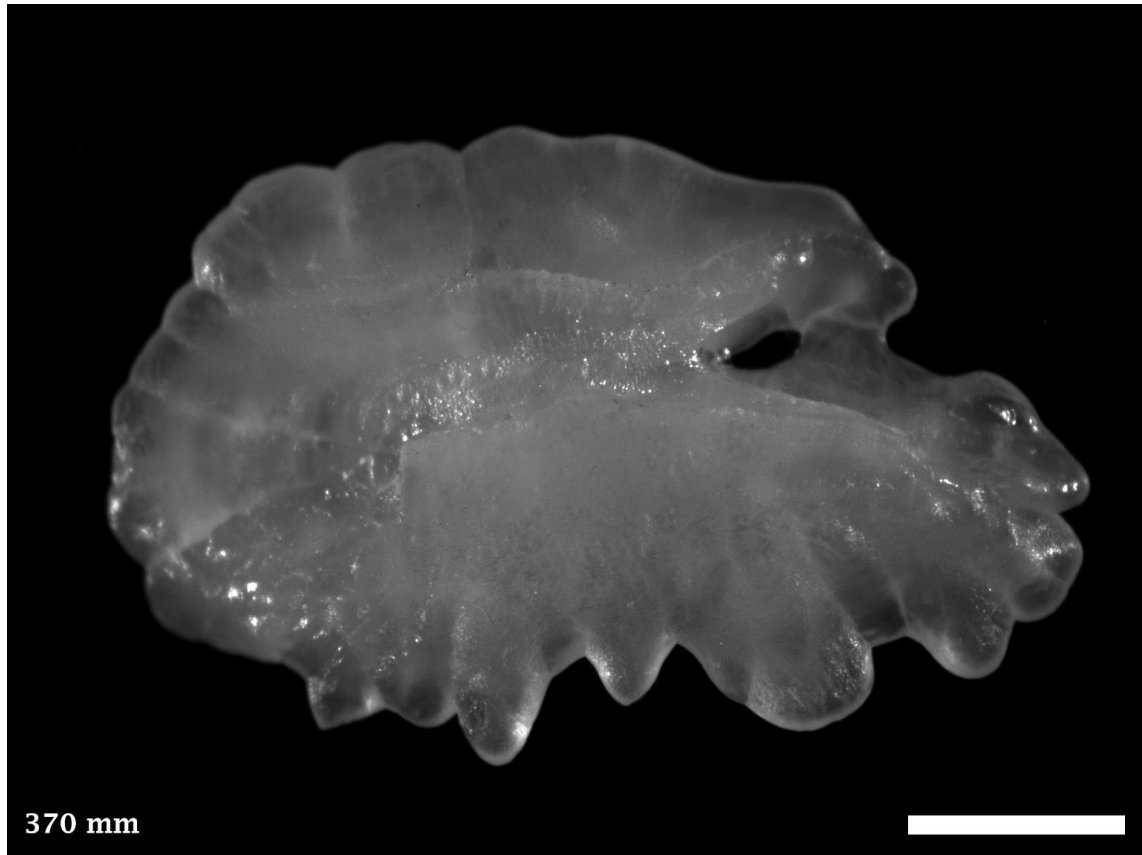


Distribution and Length: Coastal waters from Ningaloo Reef, WA south around to Bremer Bay, WA. 180 mm TL.



5.139 *Upeneichthys vlamingii*, Bluespotted Goatfish

PERCIFORMES MULLIDAE (Goatfishes)

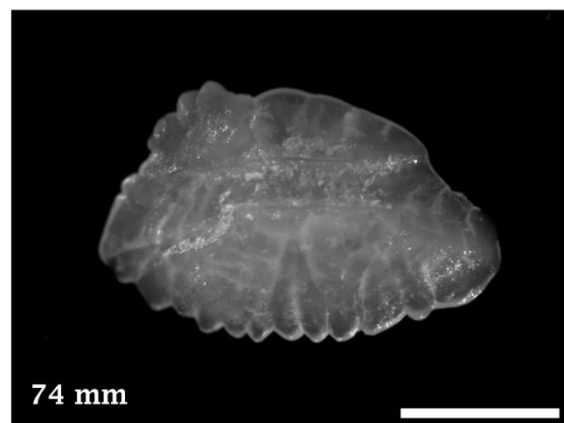
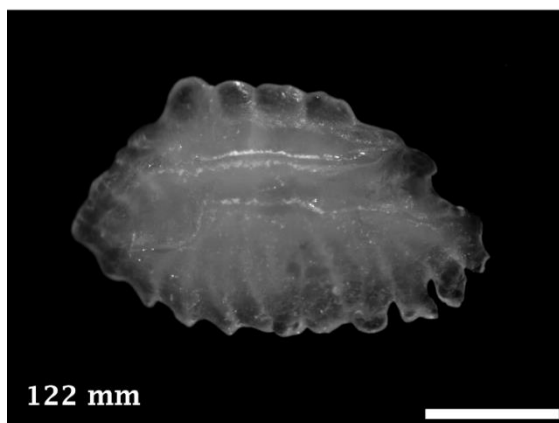
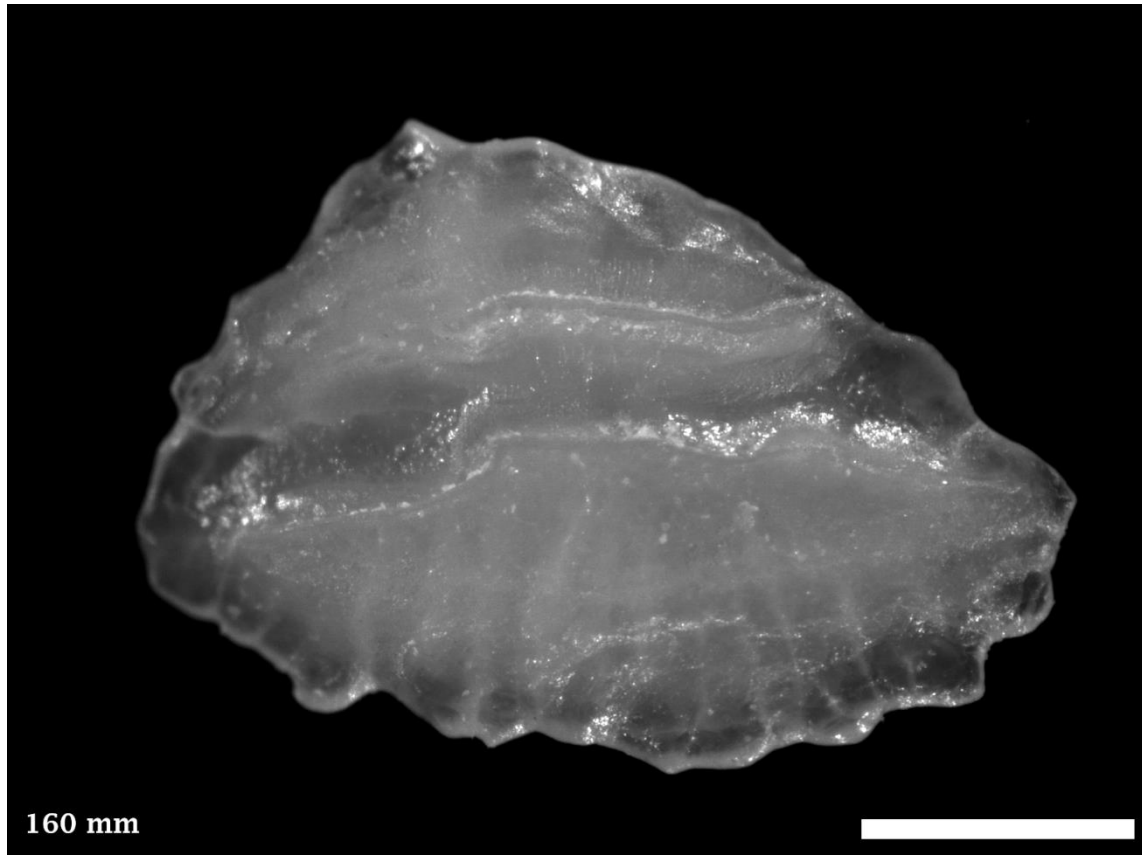


Distribution and Length: Coastal waters from Geraldton, WA south around to southern NSW, including Tasmania. 420 mm TL.



5.140 *Upeneus asymmetricus*, Asymmetric Goatfish

PERCIFORMES MULLIDAE (Goatfishes)

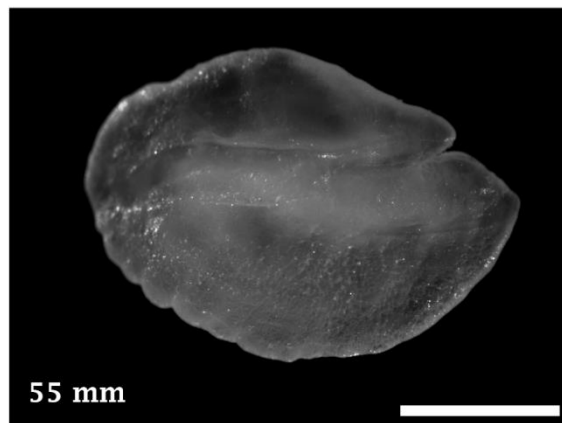
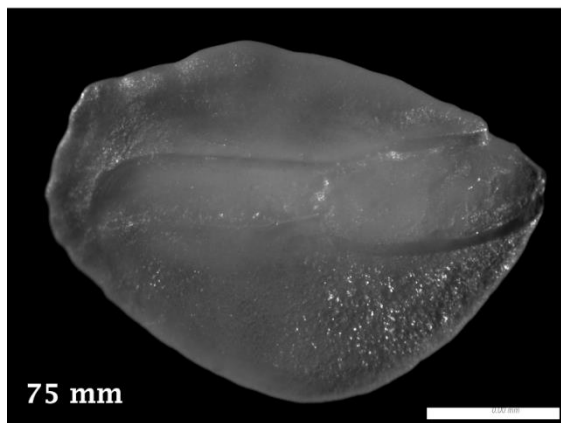
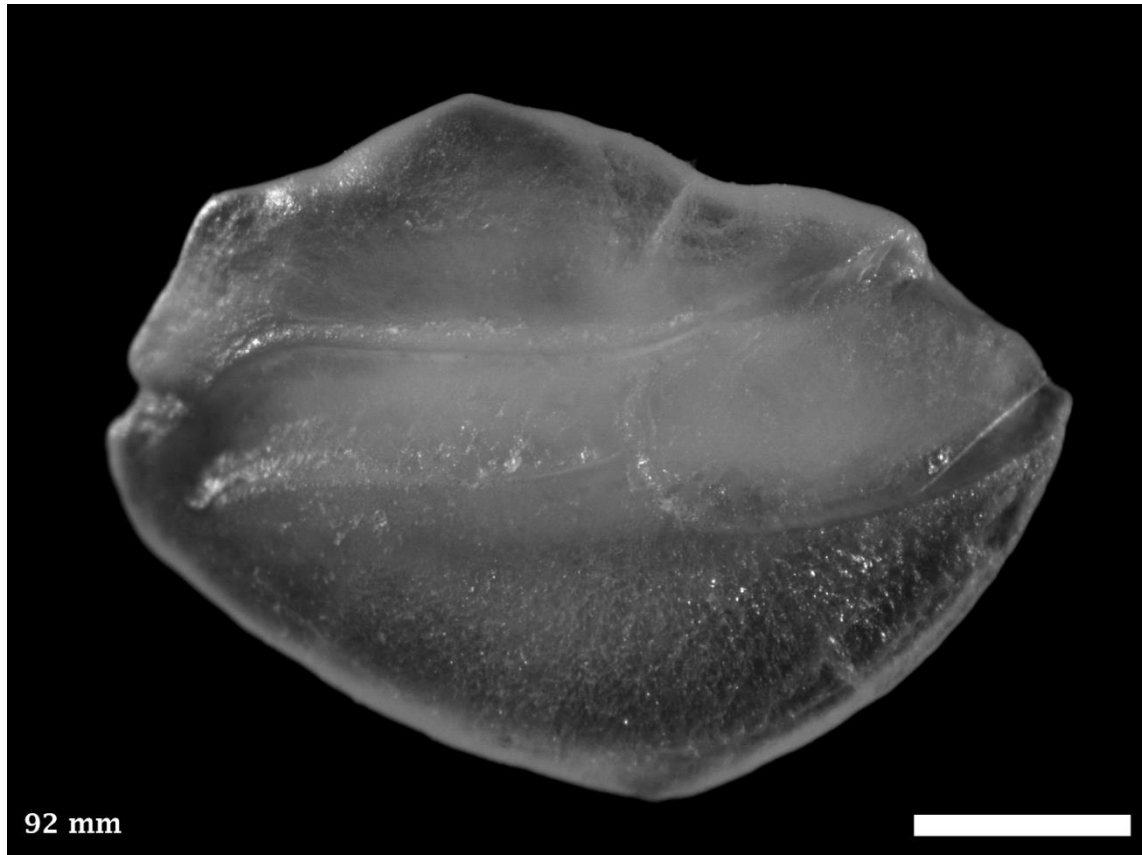


Distribution and Length: Coastal waters from Fremantle, WA north to Indo-West Pacific Ocean. 300 mm TL.



5.141 *Parapriacanthus elongatus*, Elongate Bullseye

PERCIFORMES PEMPHERIDIDAE (Bullseyes)

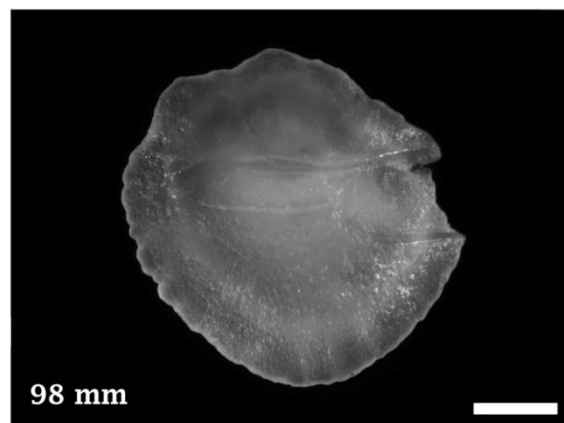
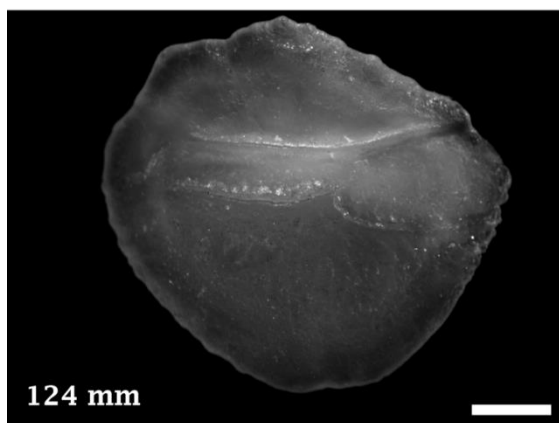
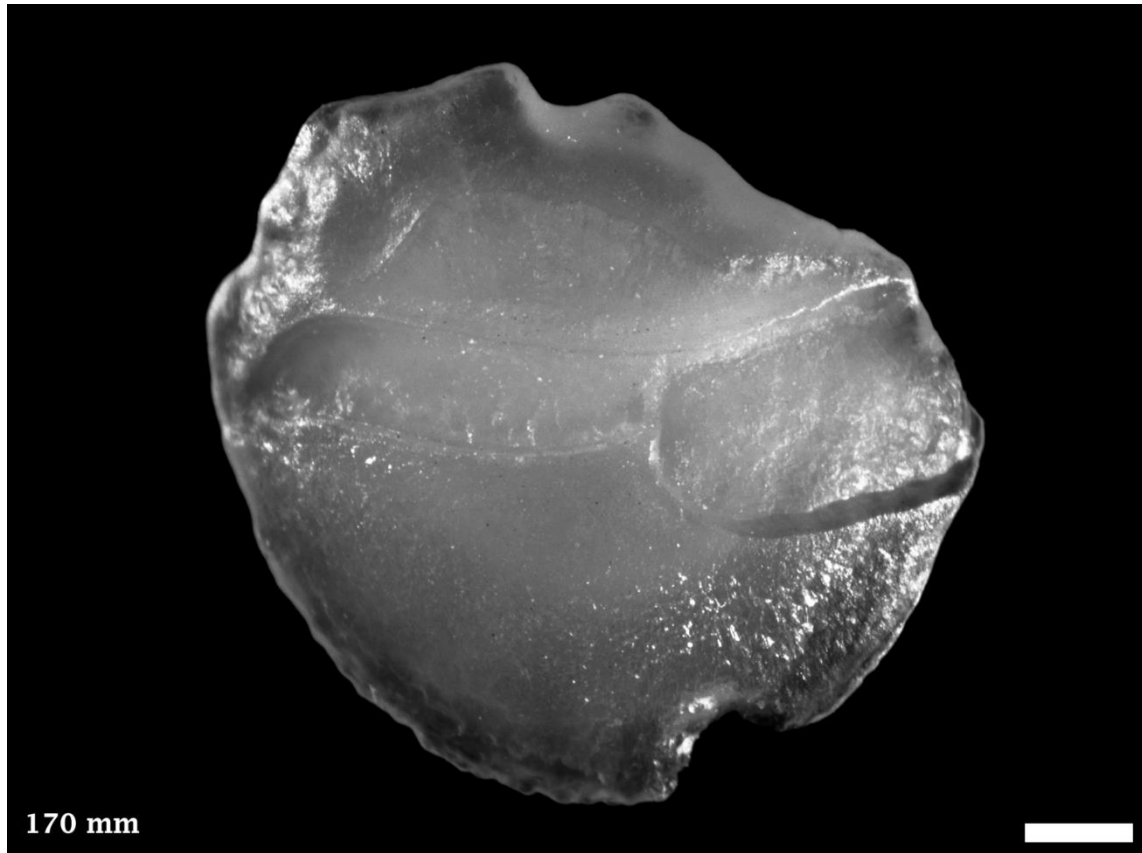


Distribution and Length: Reefs and coastal waters from Dongara, WA south around to Southern NSW, including northern Tasmania. 140 mm TL.



5.142 *Pempheris klunzingeri*, Rough Bullseye

PERCIFORMES PEMPHERIDIDAE (Bullseyes)

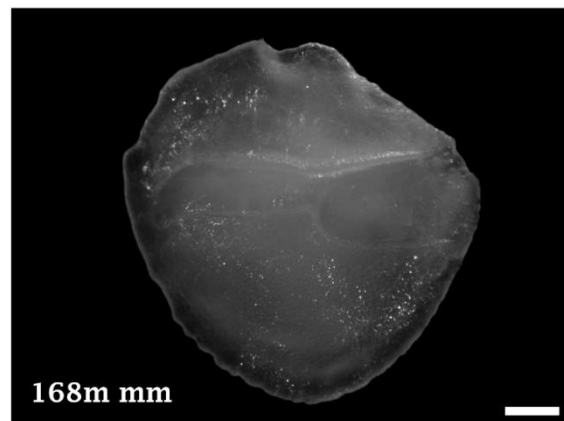
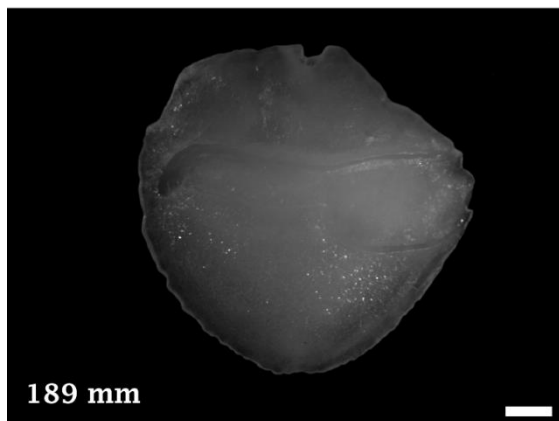
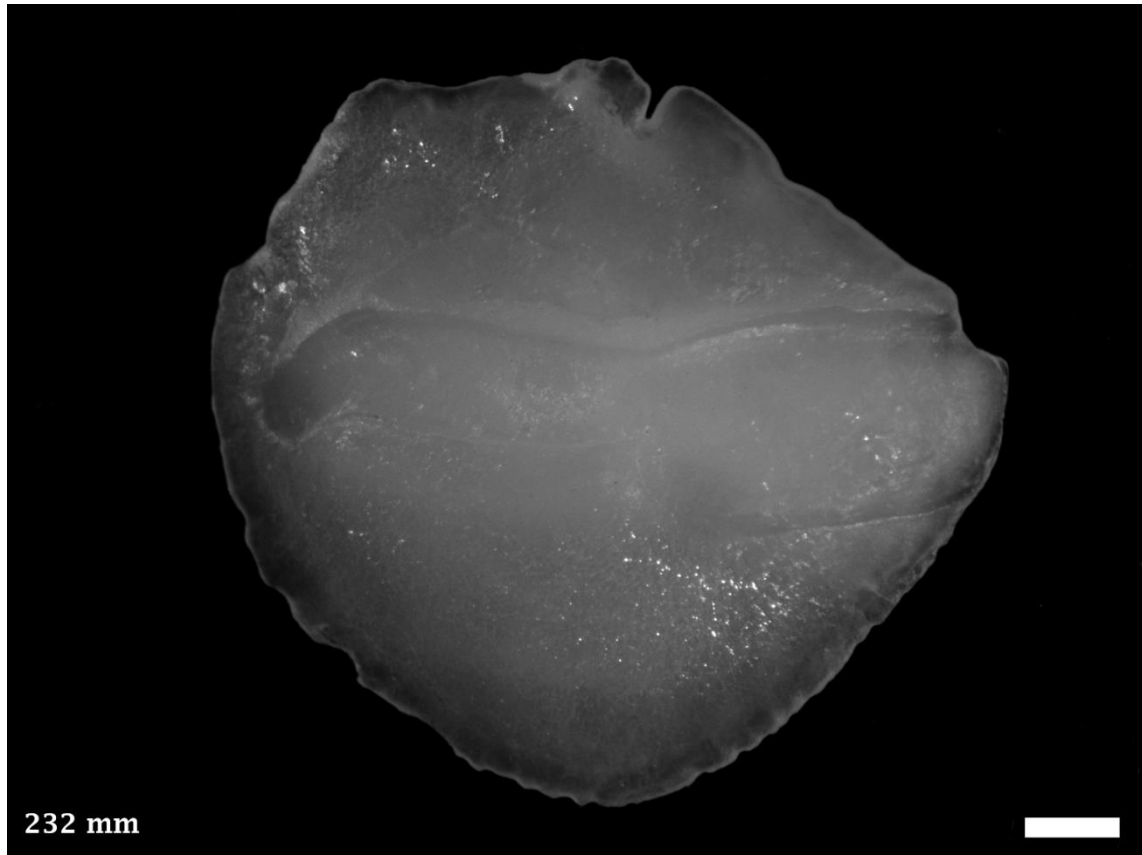


Distribution and Length: Coastal waters from Shark Bay, WA south around to Kangaroo Island, SA. 210 mm TL.



5.143 *Pempheris multiradiata*, Bigscale Bullseye

PERCIFORMES PEMPHERIDIDAE (Bullseyes)

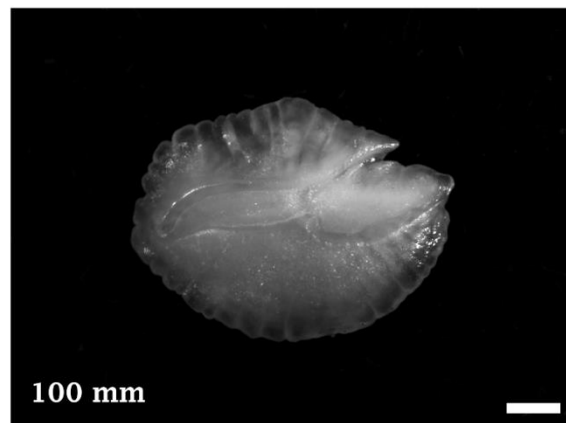
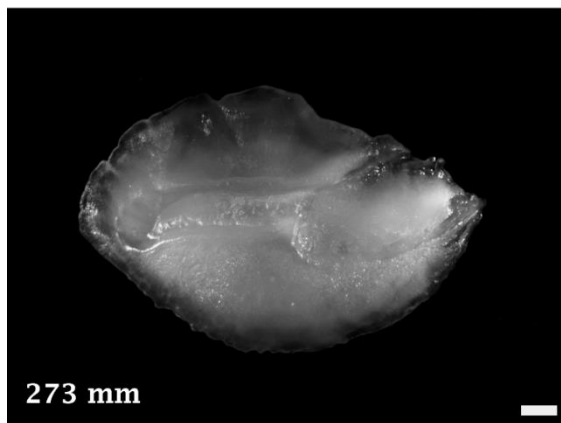
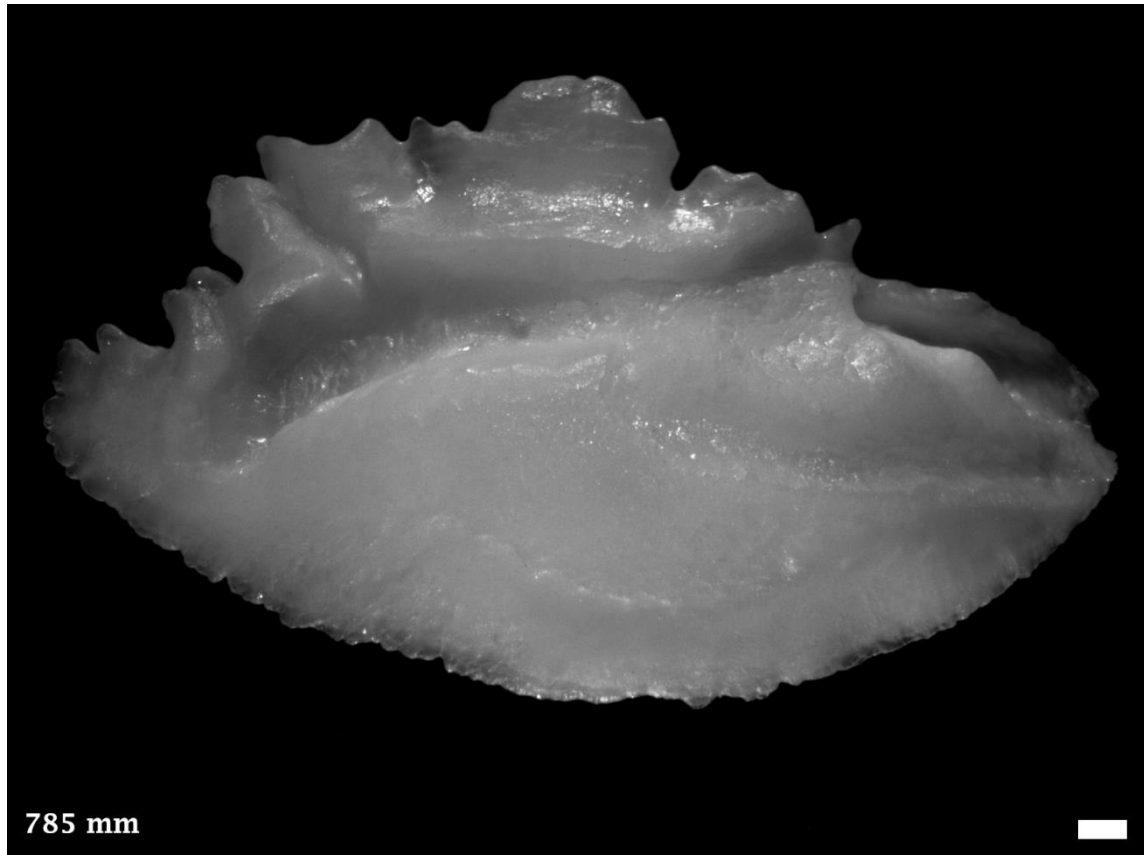


Distribution and Length: Coastal waters from Jurien Bay, WA south around to Terrigal, NSW, including Tasmania. 280 mm TL.



5.144 *Glaucosoma hebraicum*, West Australian Dhufish

PERCIFORMES GLAUCOSOMIDAE (Pearl Perches)

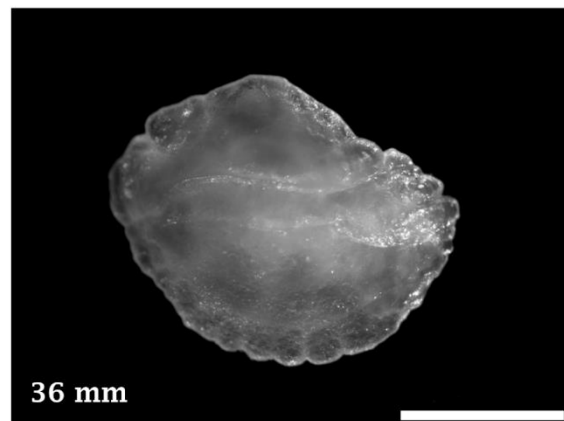
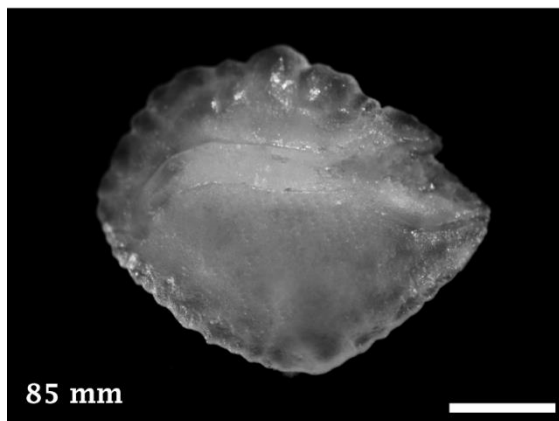
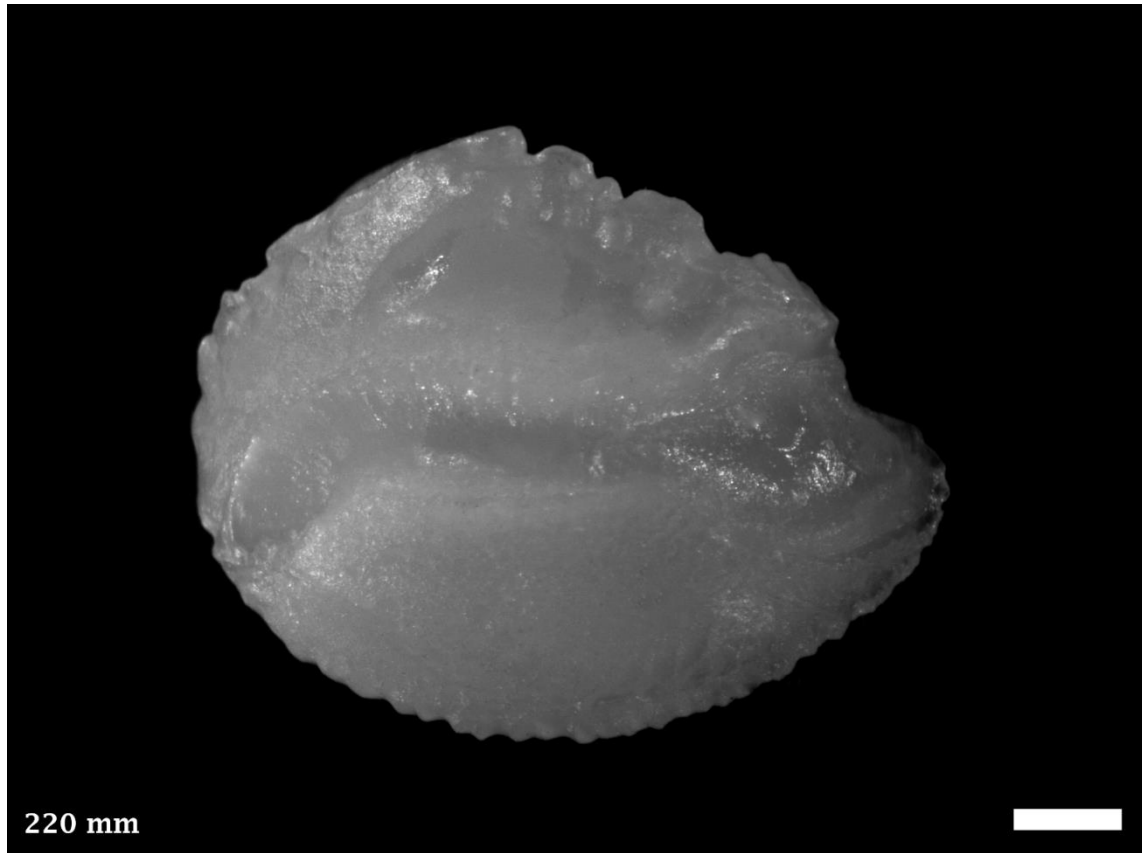


Distribution and Length: Coastal and offshore waters from Shark Bay, WA south to Recherche Archipelago, WA. 1220 mm TL.



5.145 *Schuettea woodwardi*, Western Pomfred

PERCIFORMES MONODACTYLIDAE (Silver Batfishes)

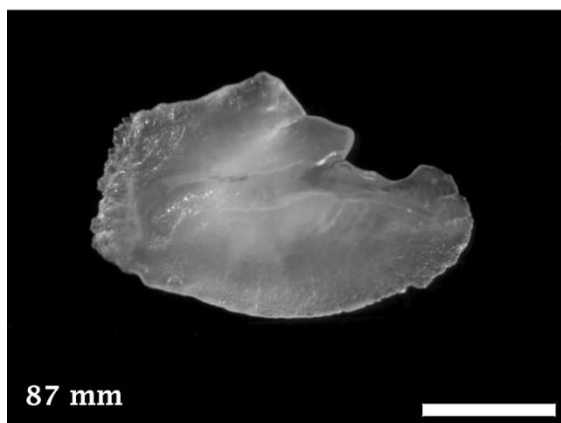
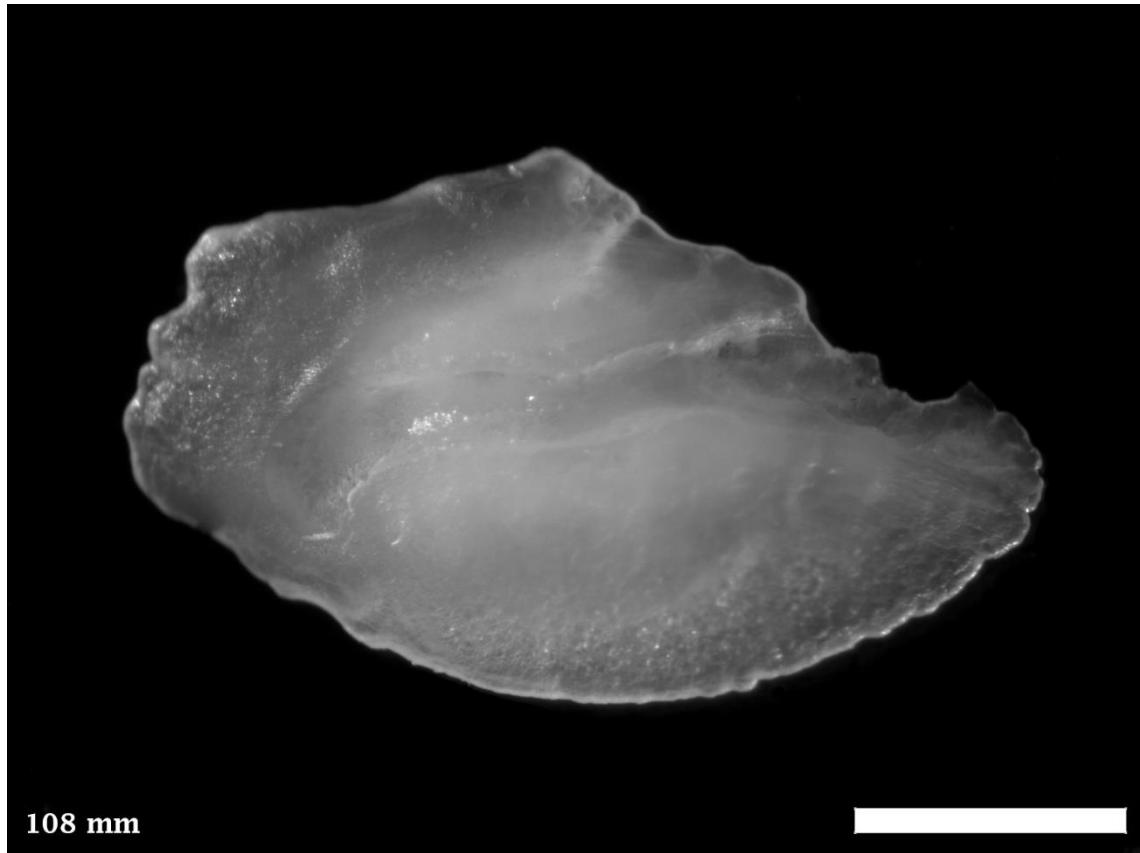


Distribution and Length: Coastal and estuarine waters from Shark Bay, WA south around to Ceduna, SA. 240 mm TL.



5.146 *Chaetodon assarius*, Western Butterflyfish

PERCIFORMES CHAETODONITDAE (Butterflyfishes)

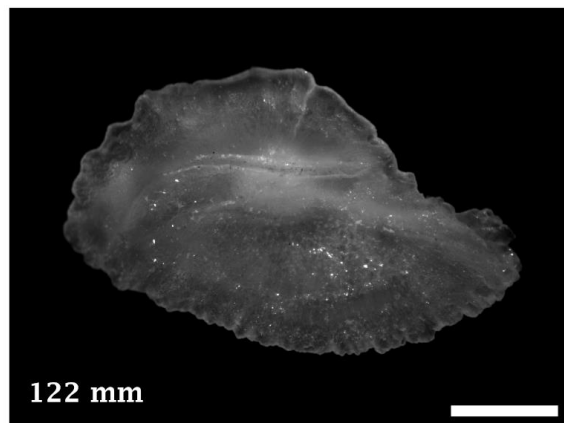
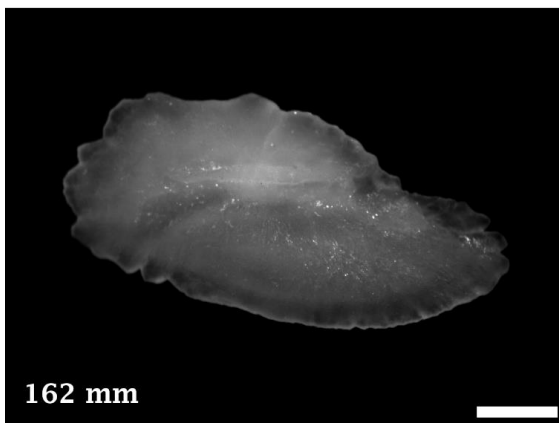
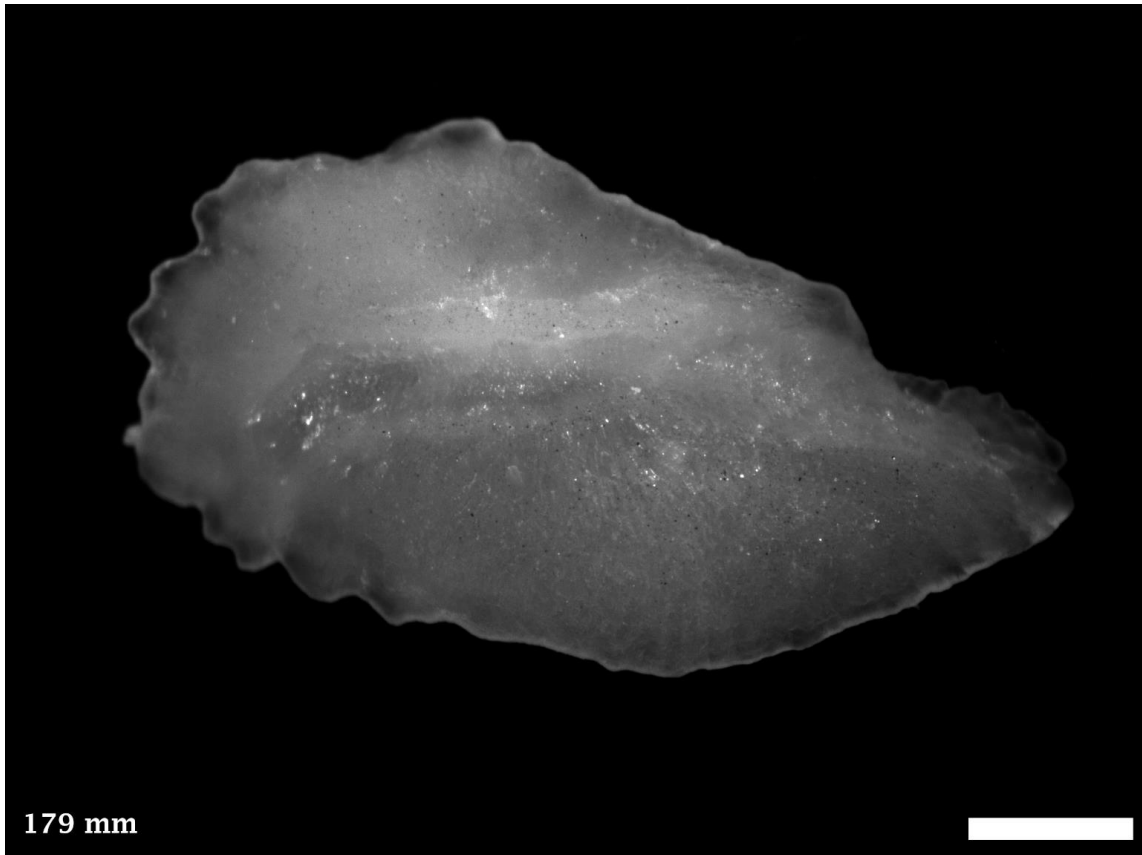


Distribution and Length: Coastal reefs from Monte Bello Islands, WA south around to Recherche Archipelago, WA. 160 mm TL.



5.147 *Chelmonops curiosus*, Western Talma

PERCIFORMES CHAETODONITDAE (Butterflyfishes)

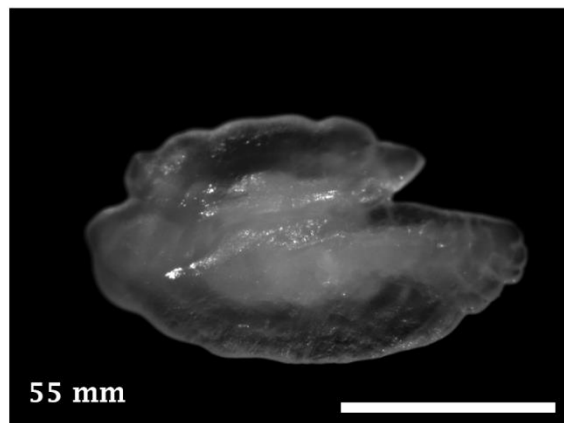
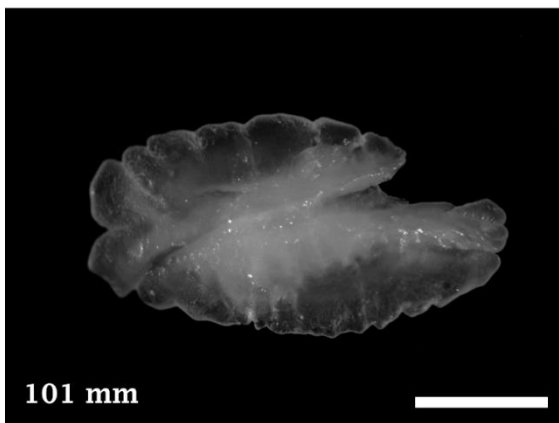
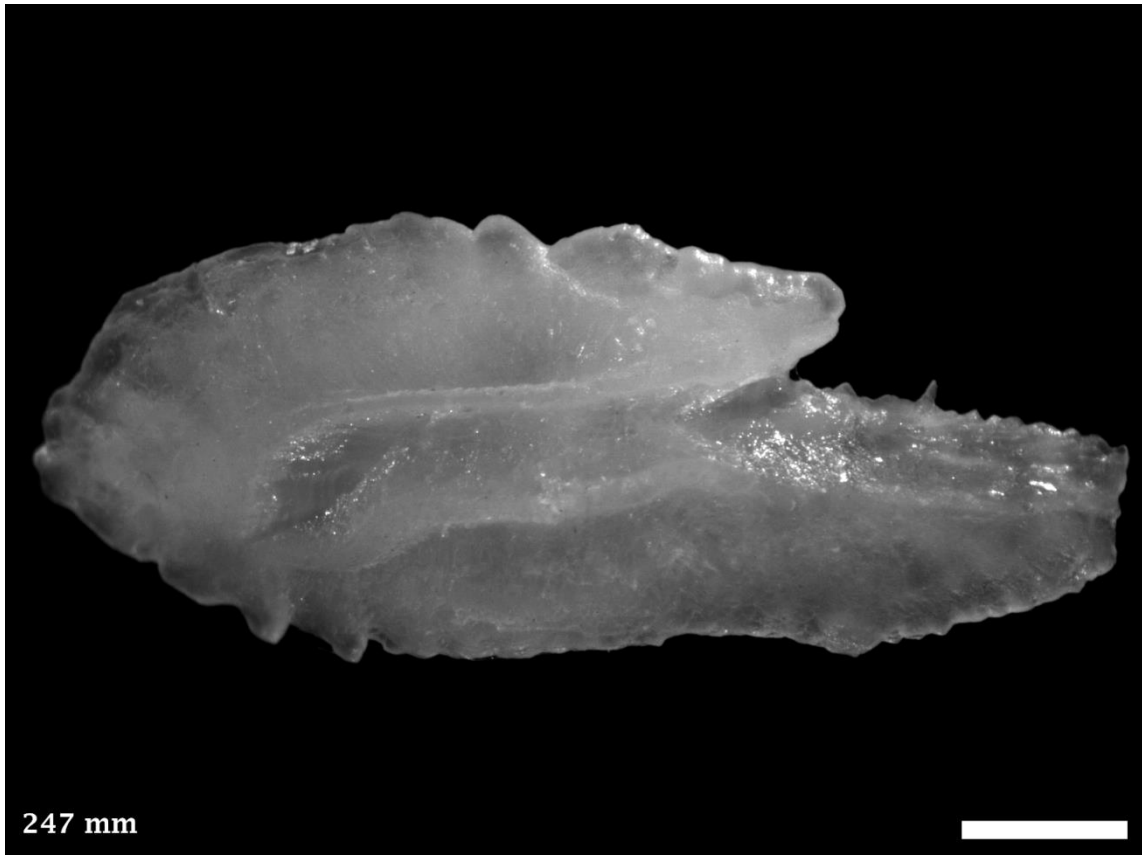


Distribution and Length: Coastal reefs from Shark Bay, WA south around to Robe, SA. 260 mm TL.



5.148 *Enoplosus armatus*, Old Wife

PERCIFORMES ENOPLOSIDAE (Old Wives)

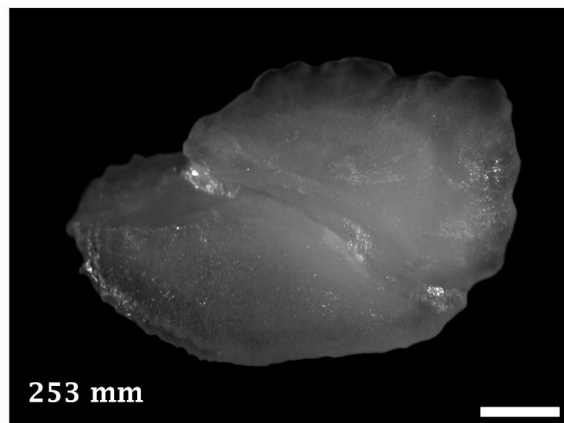
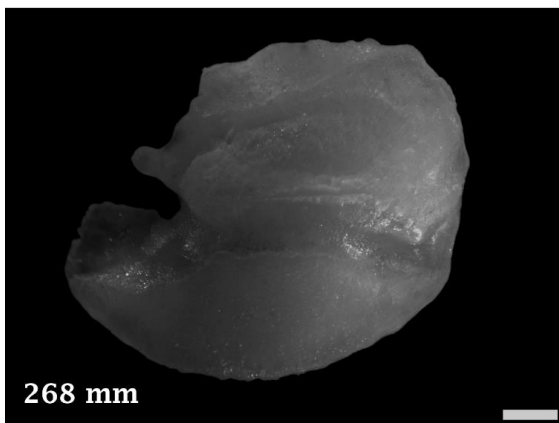
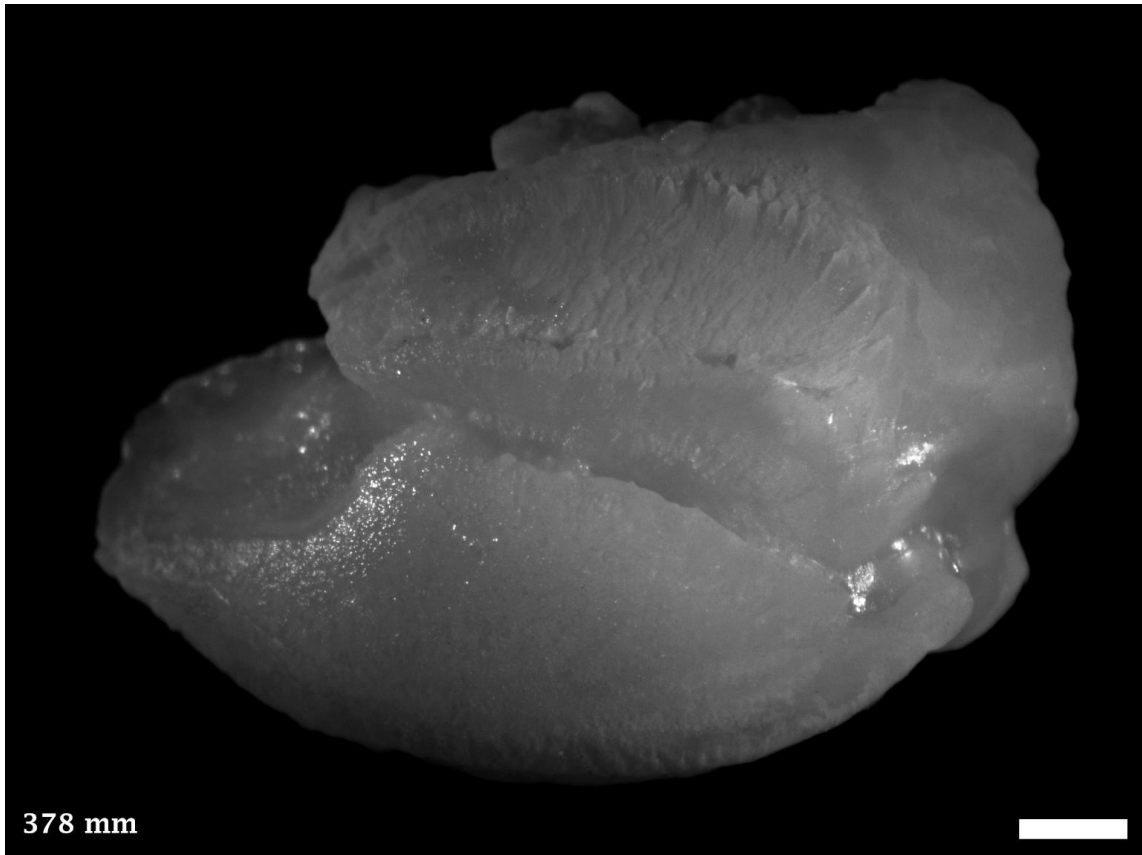


Distribution and Length: Coastal waters from Kalbarri, WA south around to Noosa Head, Qld, including northern Tasmania. 310 mm TL.



5.149 *Parazanclistius hutchinsi*, short boarfish

PERCIFORMES PENTACEROTIDAE (Boarfishes)

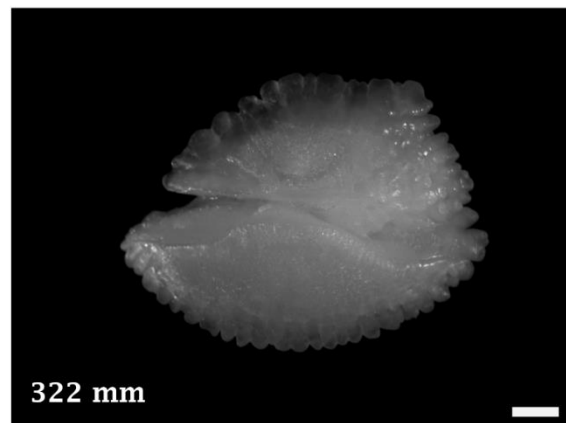
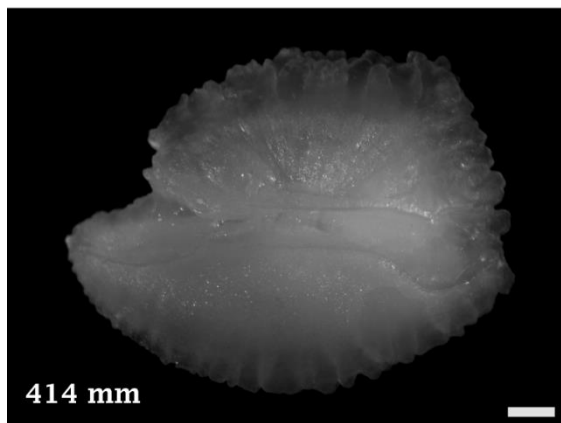
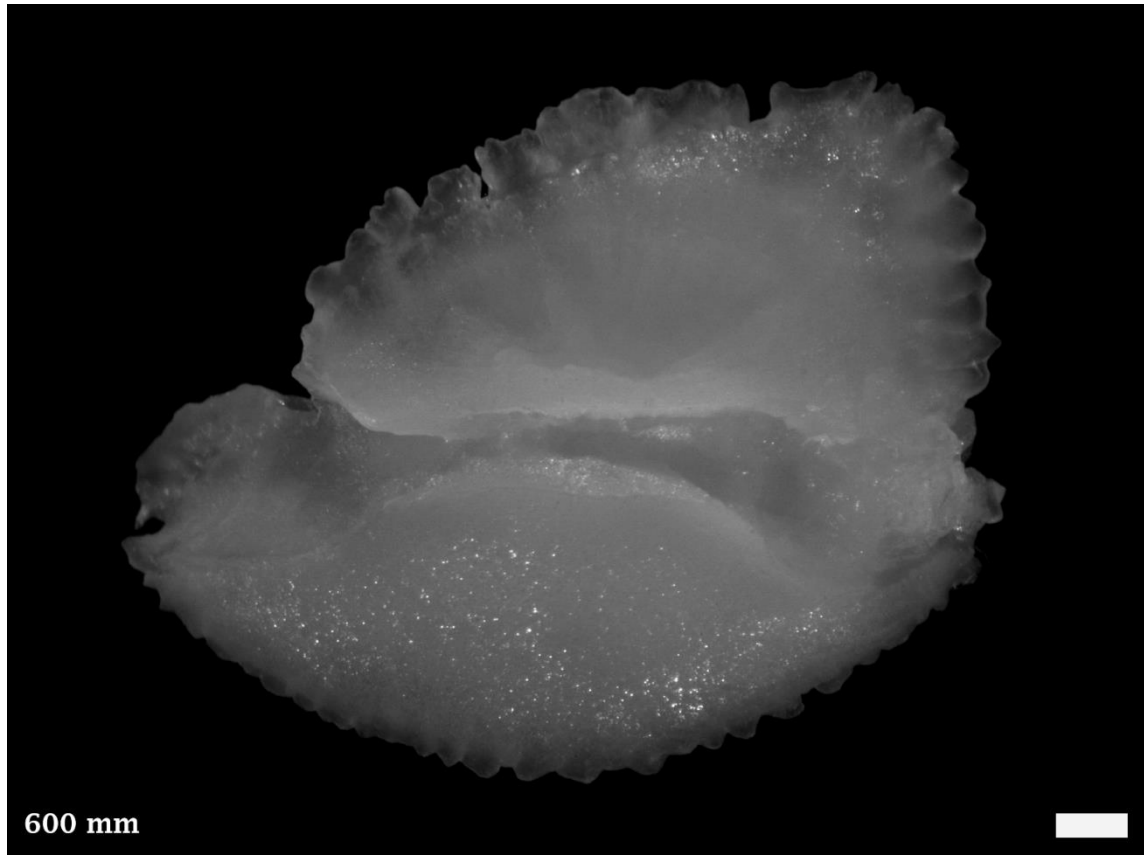


Distribution and Length: Reefs and coastal waters from Rottnest Island, WA south around to Victoria. Note: Right otoliths. 340 mm TL.



5.150 *Paristiopterus gallipavo*, Yellowspotted Boarfish

PERCIFORMES PENTACEROTIDAE (Boarfishes)

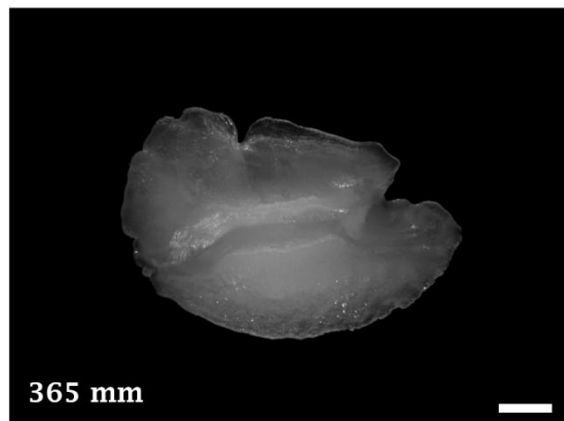
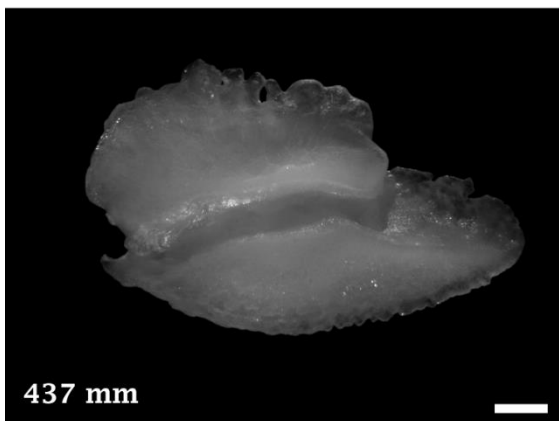
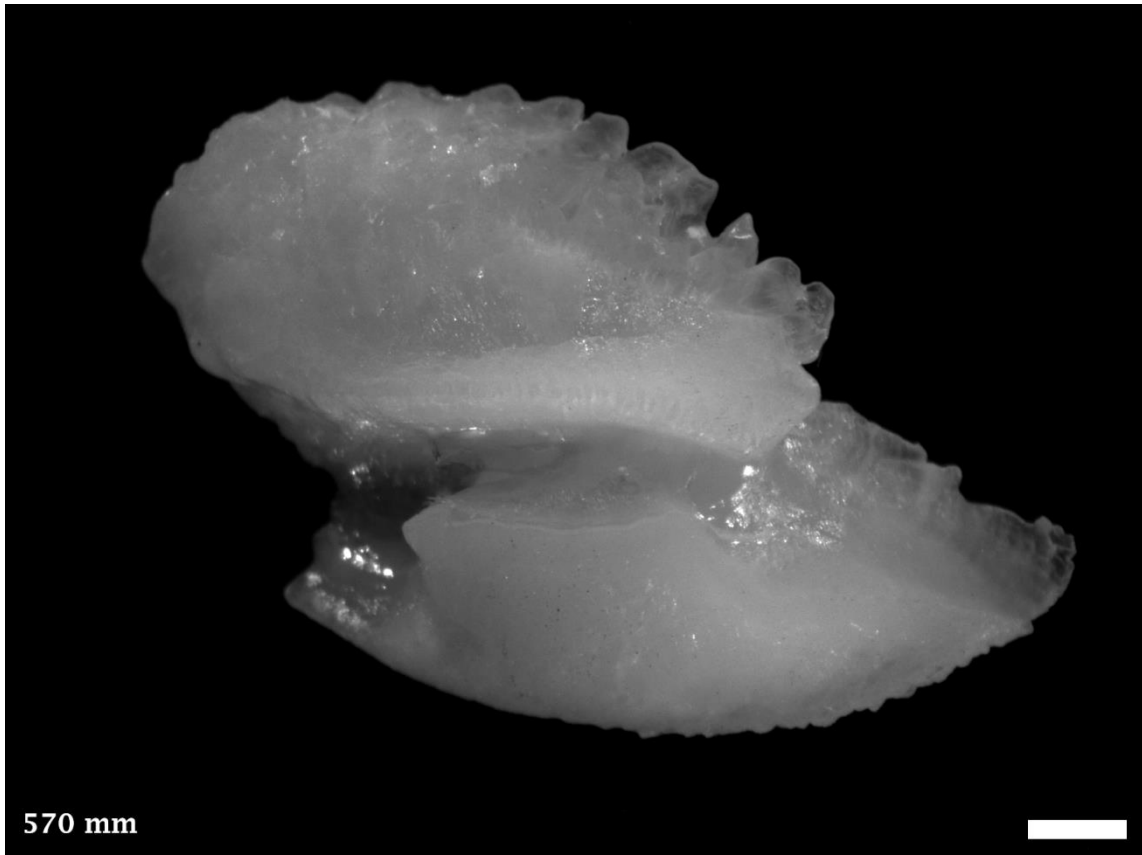


Distribution and Length: Offshore waters from Carnarvon, WA south around to Kangaroo Island, SA. Note: Right otoliths. 740 mm TL.



5.151 *Pentaceropsis recurvirostris*, Longsnout Boarfish

PERCIFORMES PENTACEROTIDAE (Boarfishes)

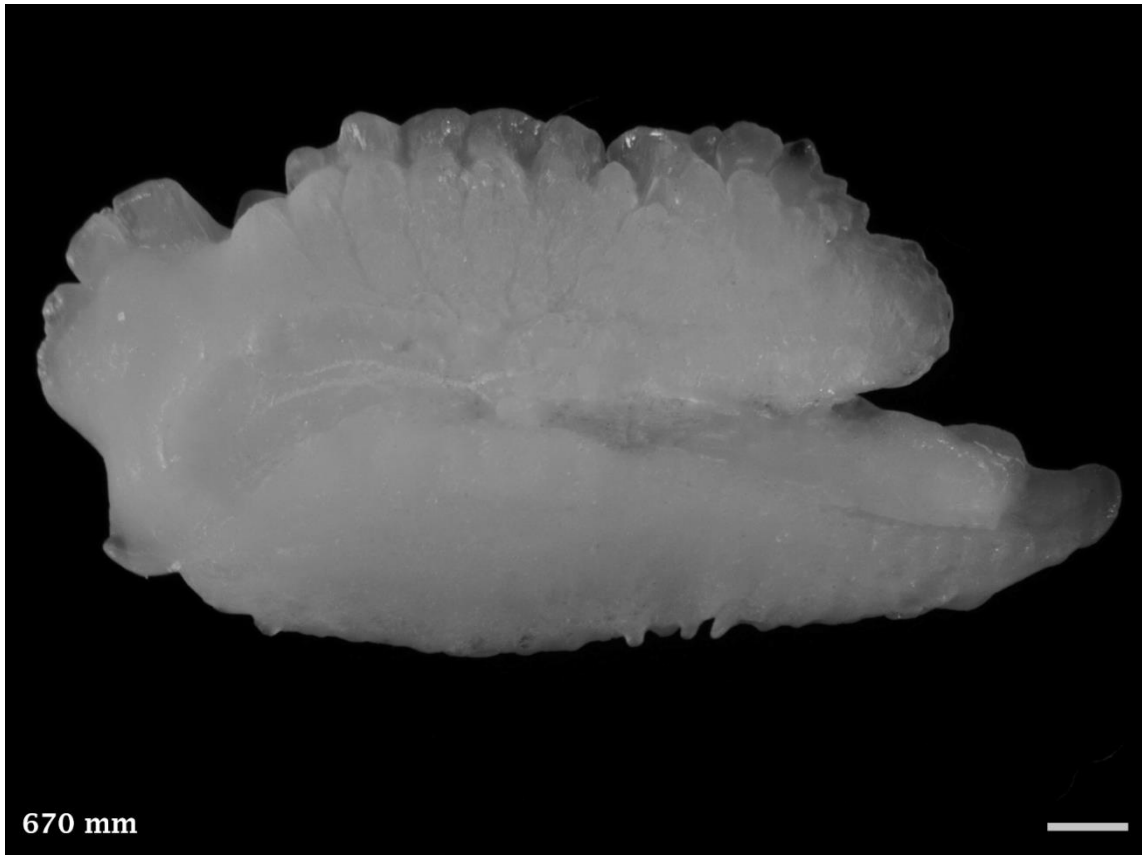


Distribution and Length: Offshore waters from Fremantle, WA south around to Eden, NSW, including Tasmania. 570 mm TL.



5.152 *Pseudopentaceros richardsoni*, Pelagic Armourhead

PERCIFORMES PENTACEROTIDAE (Boarfishes)

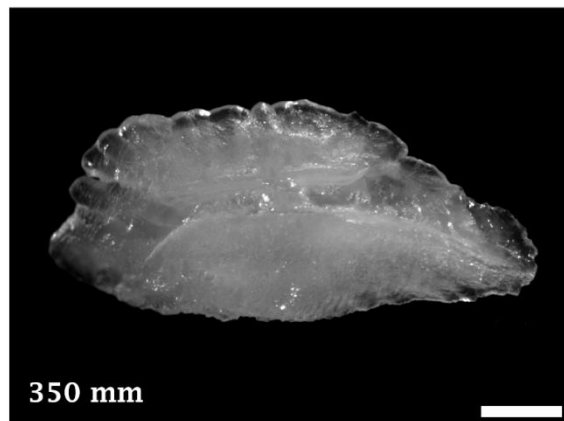
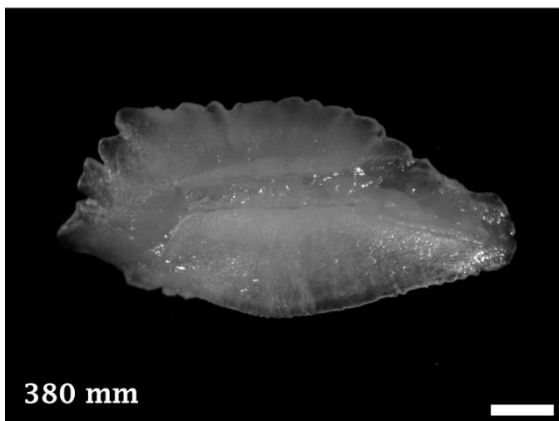
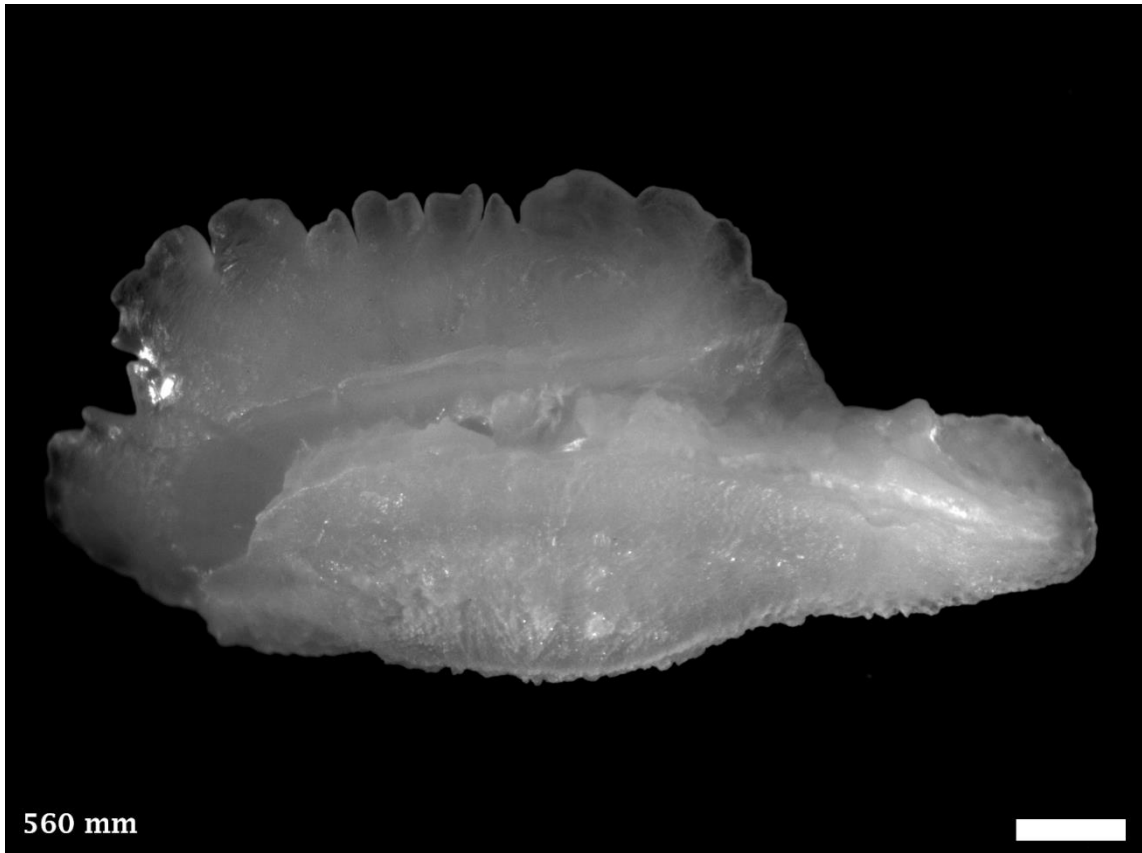


Distribution and Length: Offshore waters from Jurien Bay, WA south around to southern Queensland, including Tasmania. 670 mm TL.



5.153 *Girella tephraeops*, Western Rock Blackfish

PERCIFORMES KYPHOSIDAE (Drummer)

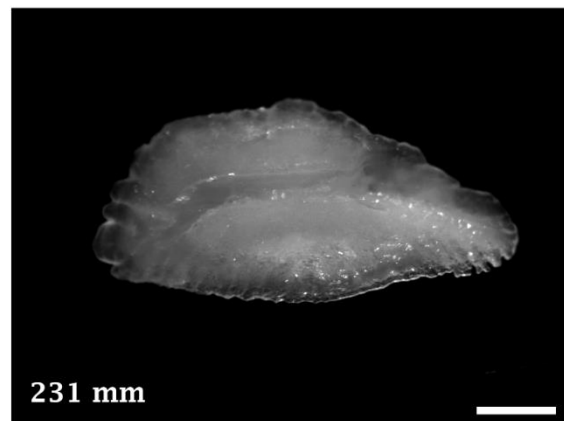
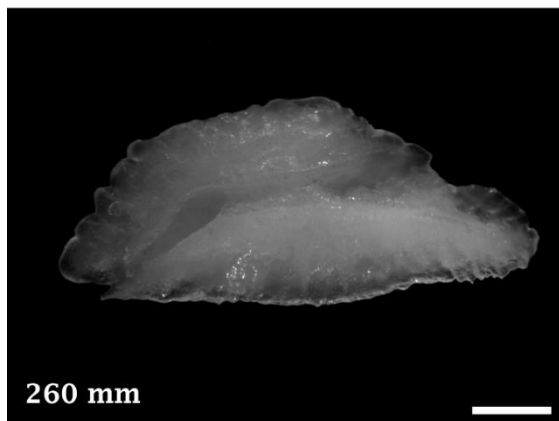
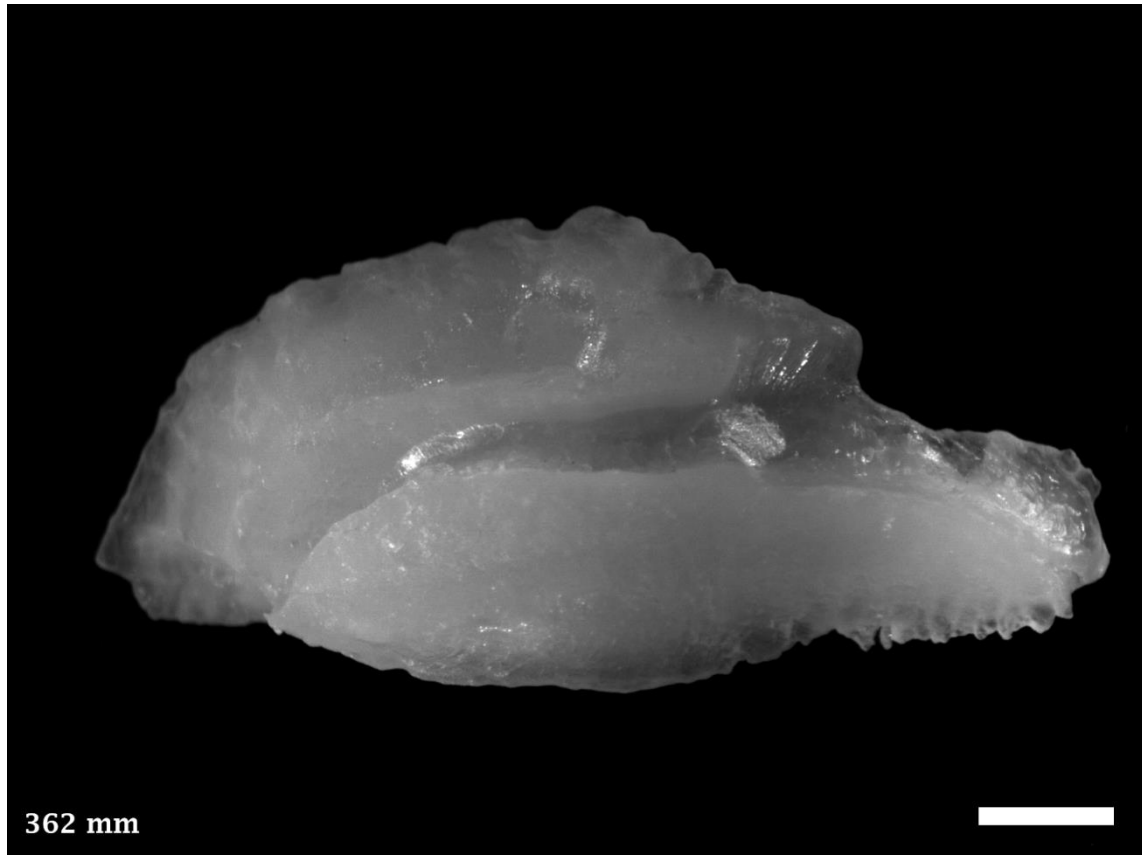


Distribution and Length: Coastal reefs from Carnarvon, WA south to Recherche Archipelago, WA. 620 mm TL.



5.154 *Girella zebra*, Zebrafish

PERCIFORMES KYPHOSIDAE (Drummer)

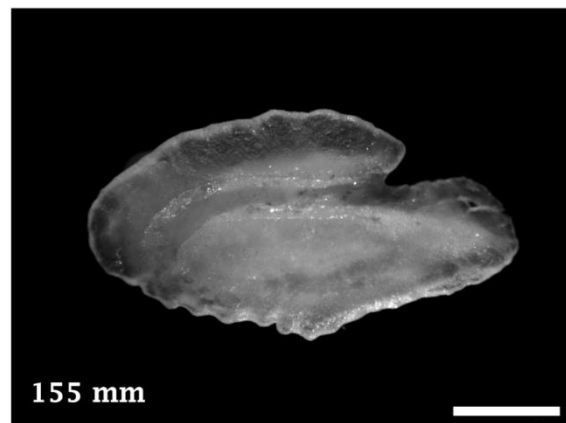
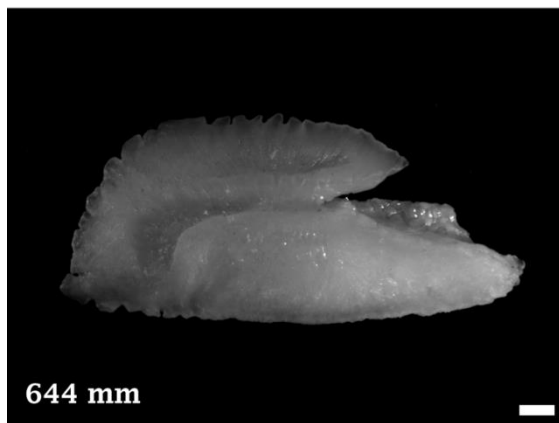
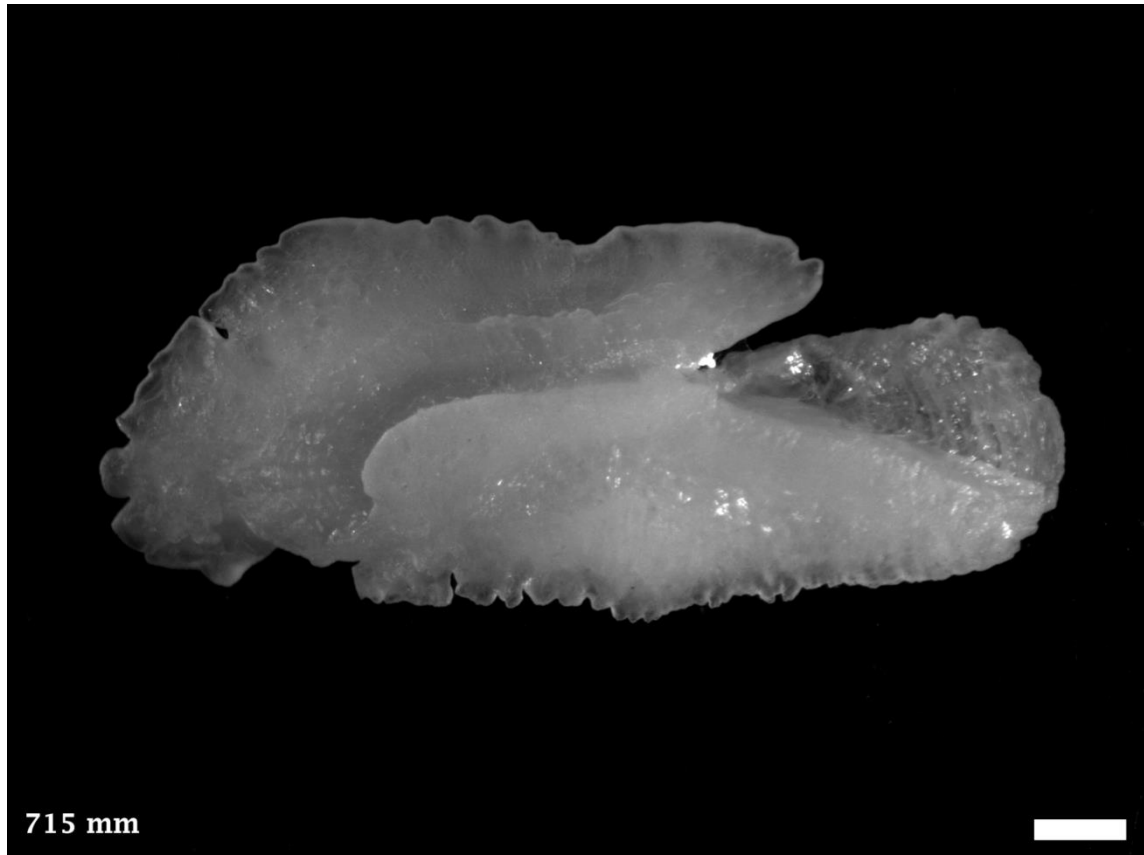


Distribution and Length: Coastal and estuarine waters from Jurien Bay, WA south around to Sydney, NSW, including northern Tasmania. 540 mm TL.



5.155 *Kyphosus sydneyanus*, Silver Drummer

PERCIFORMES KYPHOSIDAE (Drummer)

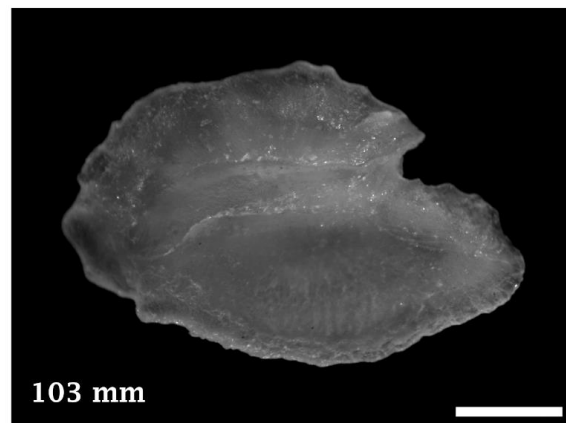
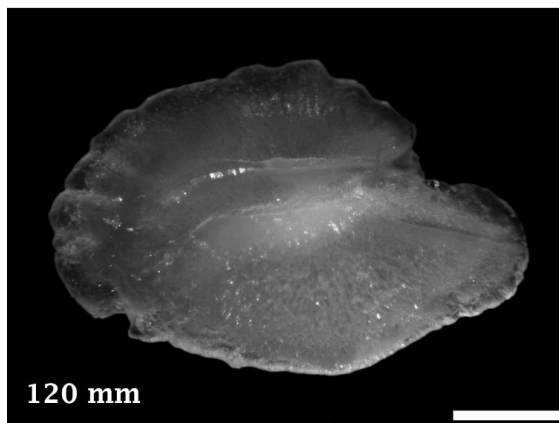
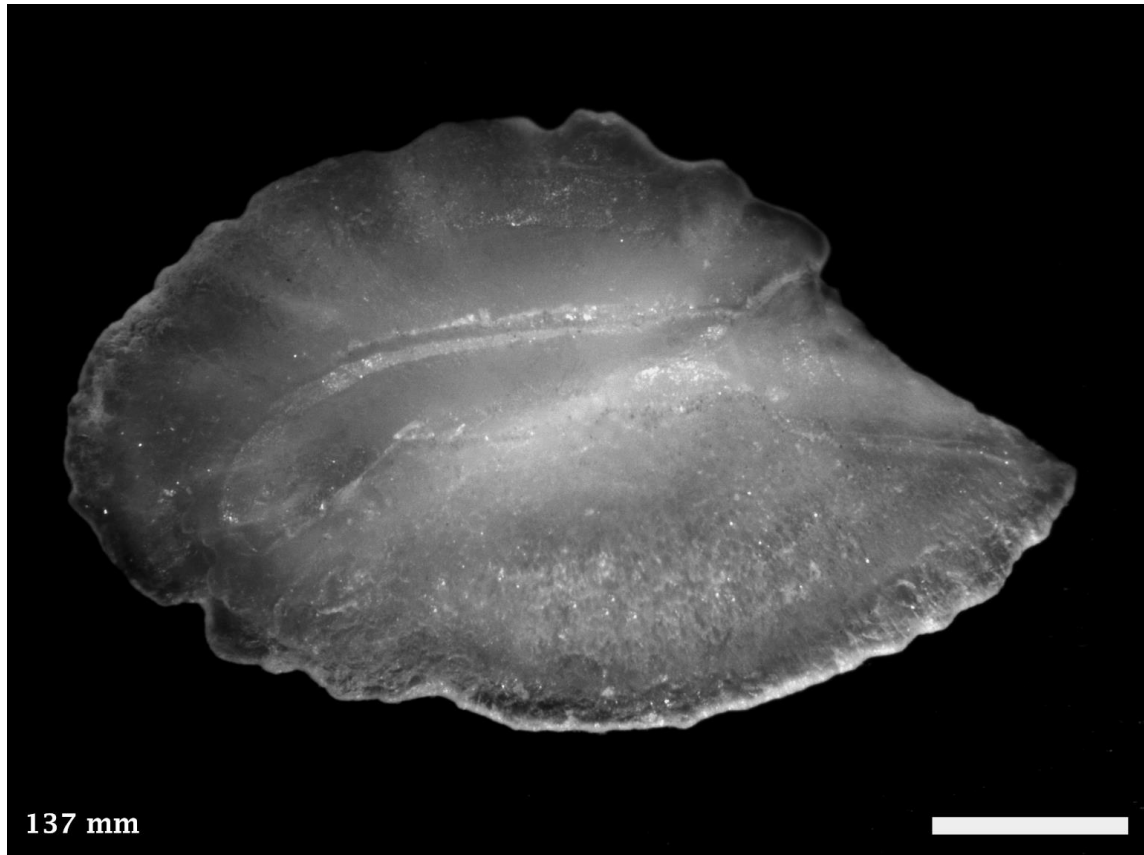


Distribution and Length: Coastal waters from Shark Bay, WA south around to Morton Bay, Qld, including northern Tasmania. 860 mm TL.



5.156 *Microcanthus strigatus*, Stripey

PERCIFORMES SCORPIDIDAE (Sweeps)

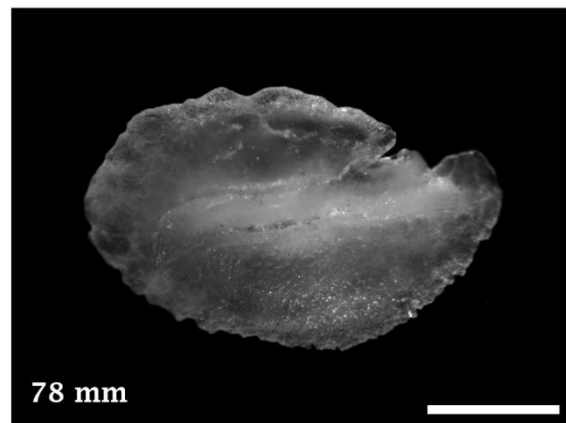
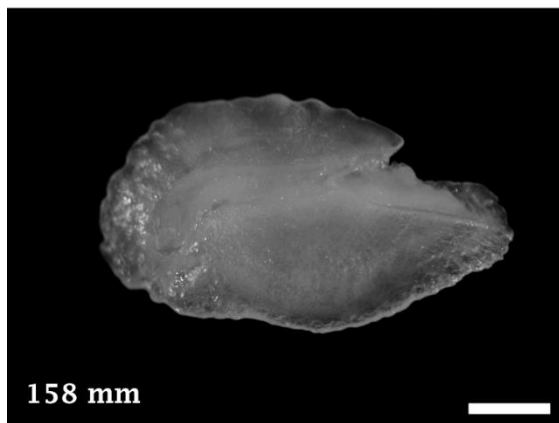
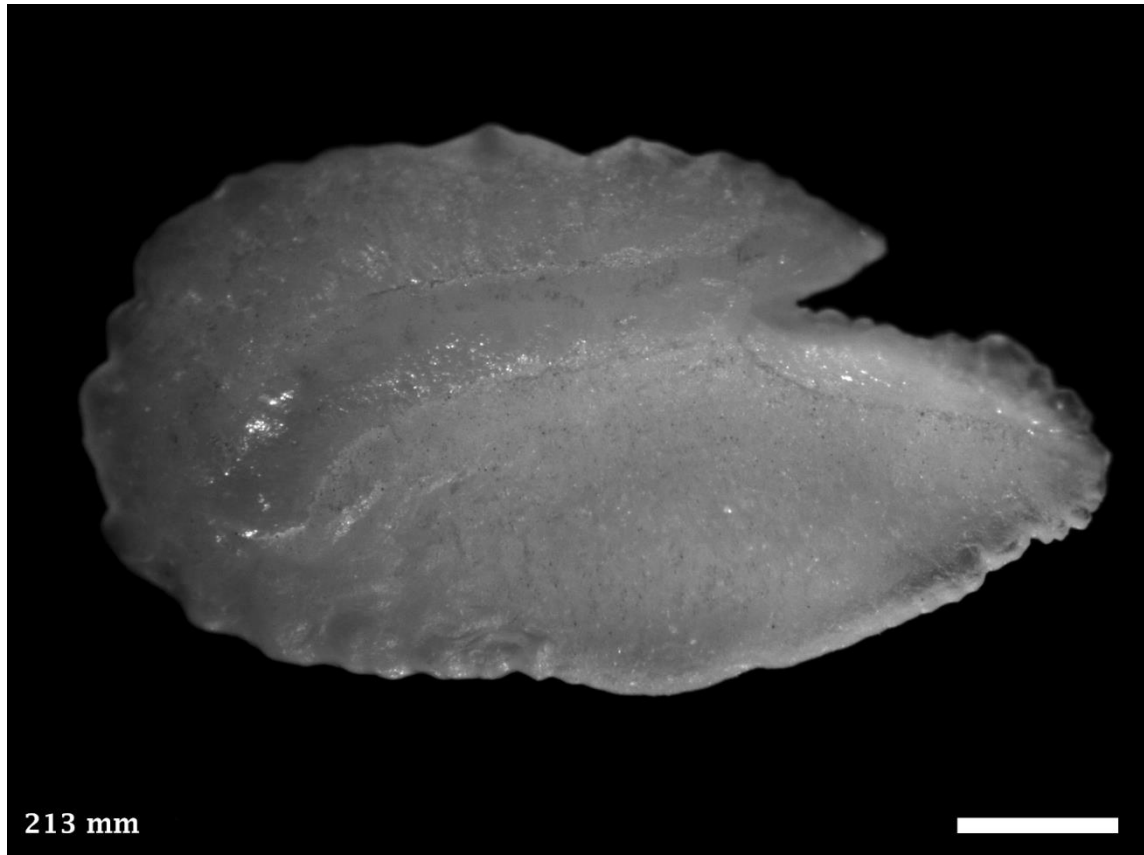


Distribution and Length: Coastal waters from Exmouth Gulf, WA south to Cape Leeuwin, WA. 160 mm TL.



5.157 *Neatypus obliquus*, Footballer Sweep

PERCIFORMES SCORPIDIDAE (Sweeps)

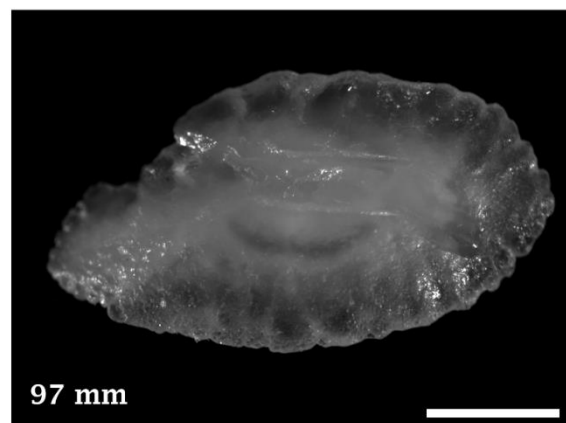
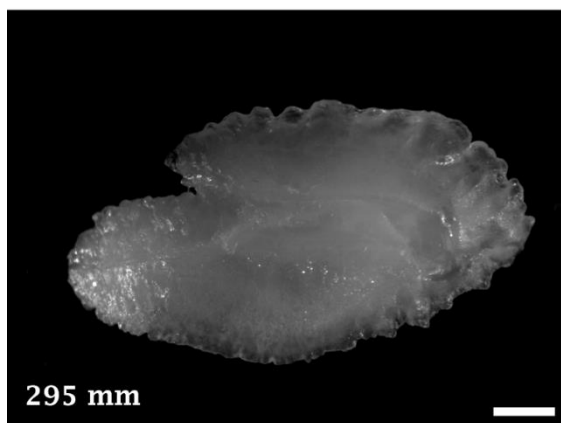
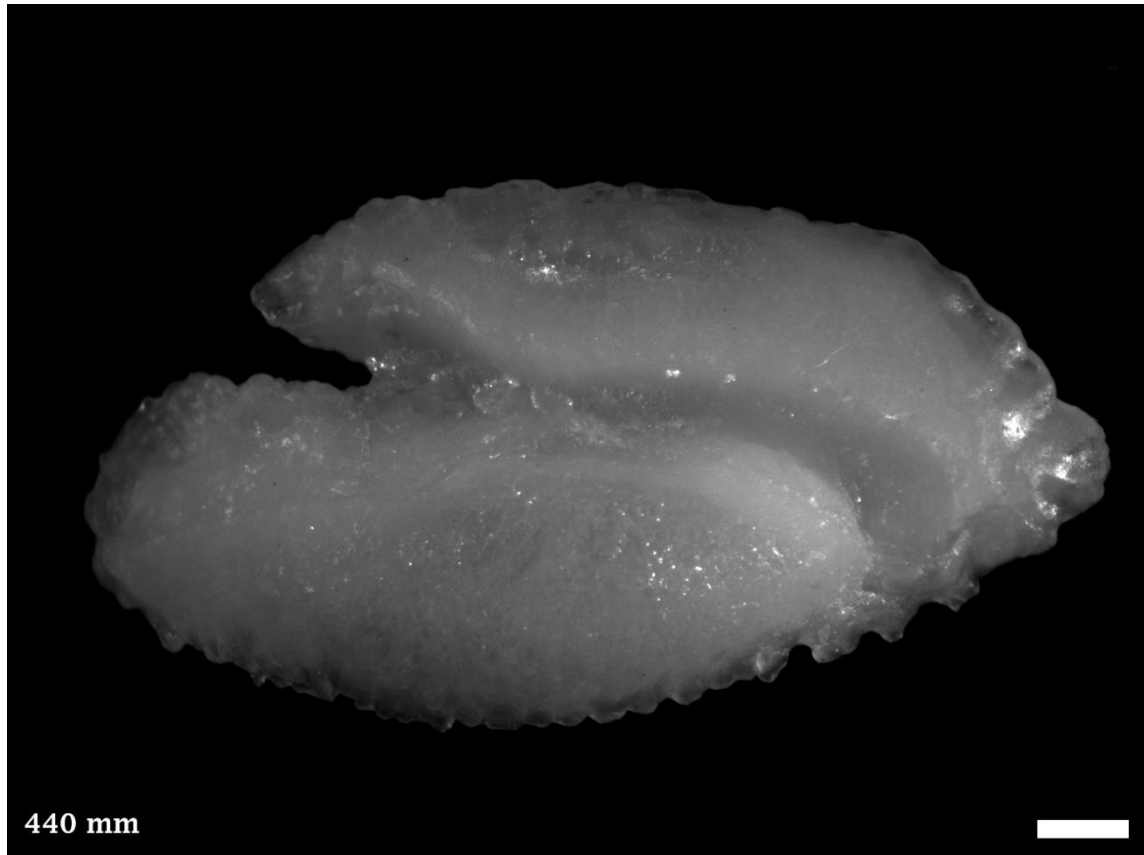


Distribution and Length: Coastal and offshore waters from Shark Bay, WA south around to Flinders Island, SA. 240 mm TL.



5.158 *Scorpis aequipinnis*, Sea Sweep

PERCIFORMES SCORPIDIDAE (Sweeps)

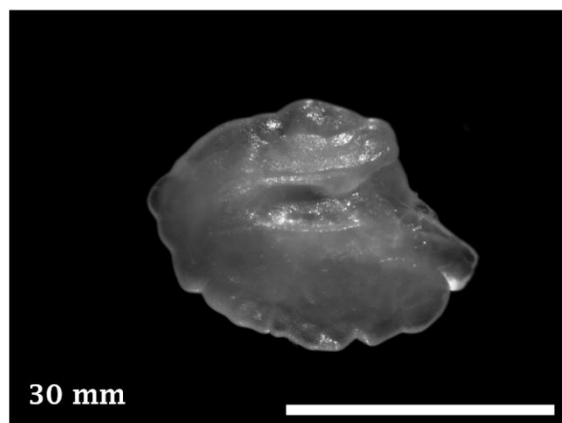
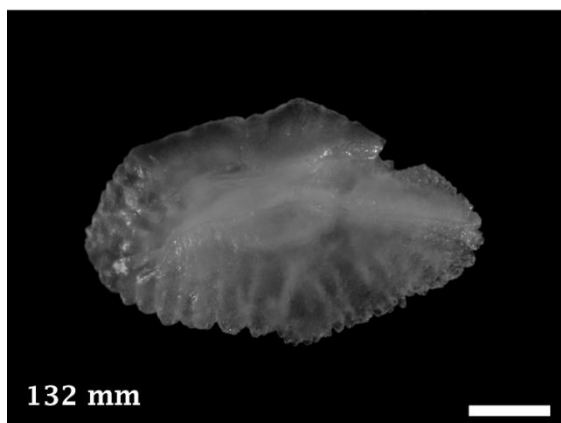
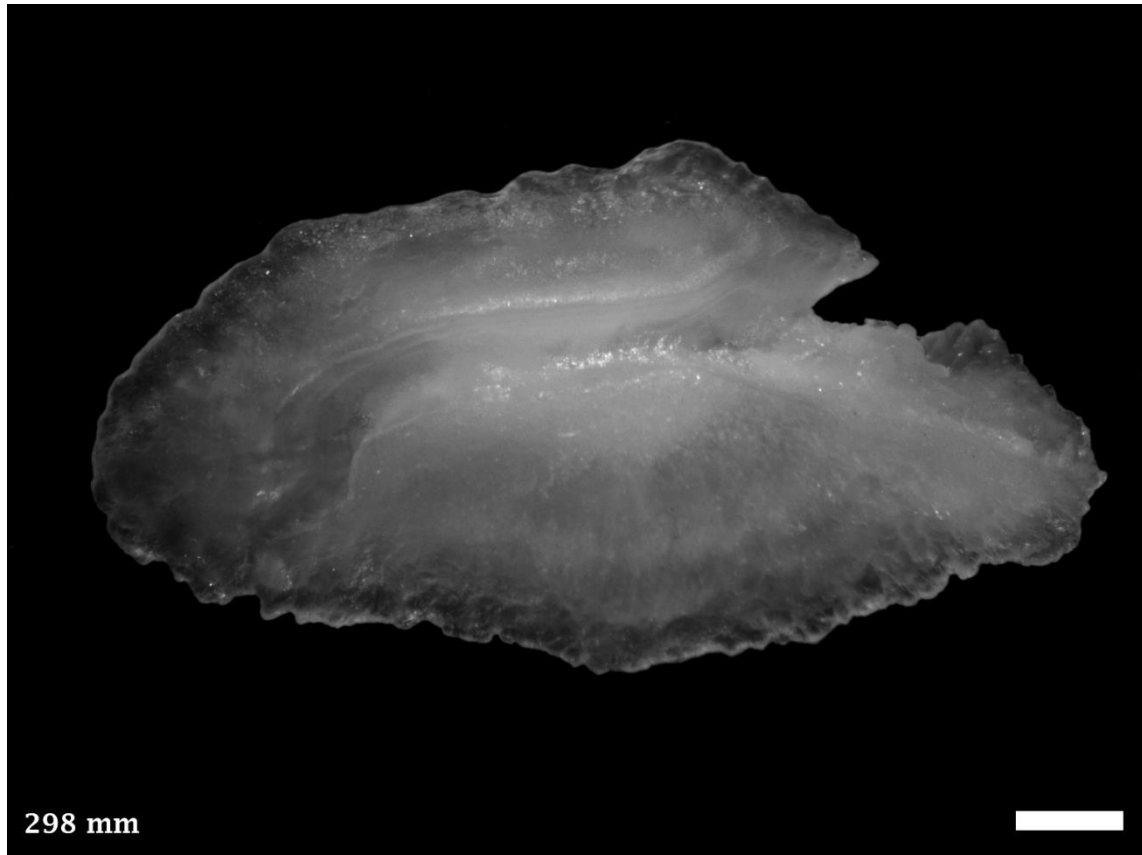


Distribution and Length: Coastal and offshore waters from Shark Bay, WA south around to Jervis Bay, NSW, including Tasmania. Note: Right otoliths. 610 mm TL.



5.159 *Scorpis georgianus*, Banded Sweep

PERCIFORMES SCORPIDIDAE (Sweeps)

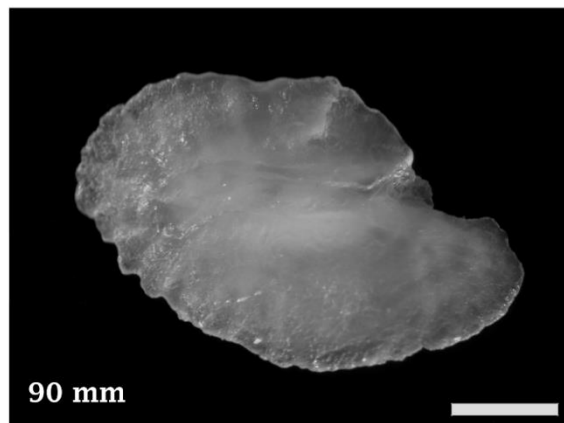
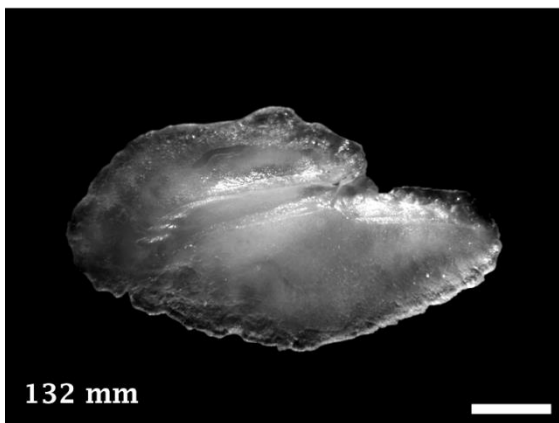
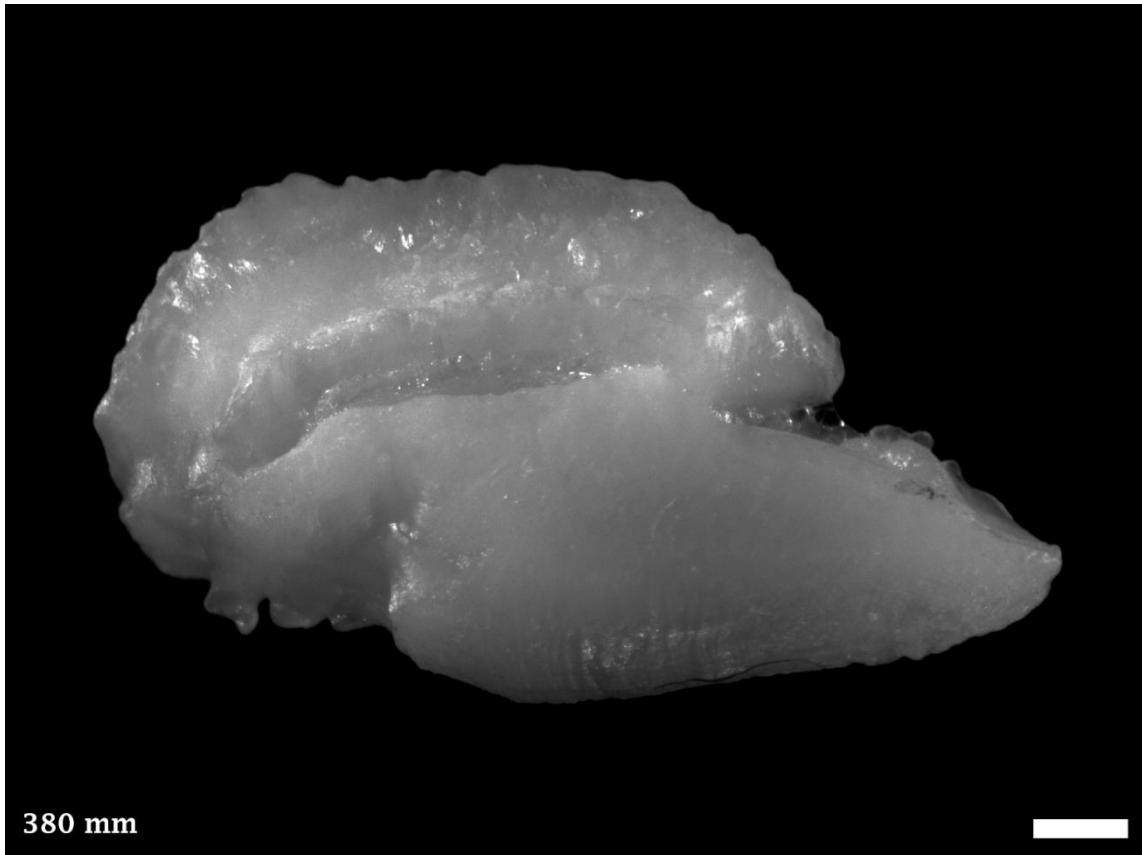


Distribution and Length: Coastal waters from Coral Bay, WA south around to Kangaroo Island, SA. 460 mm TL.



5.160 *Tilodon sexfasciatus*, Moonlighter

PERCIFORMES SCORPIDIDAE (Sweeps)

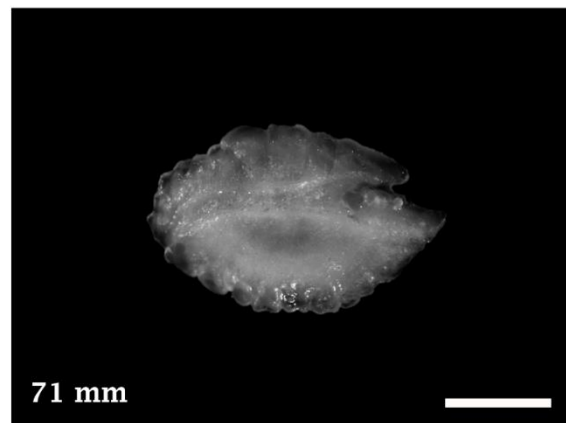
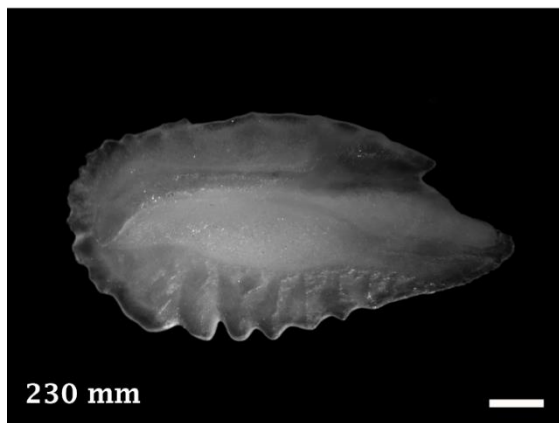


Distribution and Length: Coastal reefs from Jurien Bay, WA south to Port Phillip Bay, Victoria, including northern Tasmania. 400 mm TL.

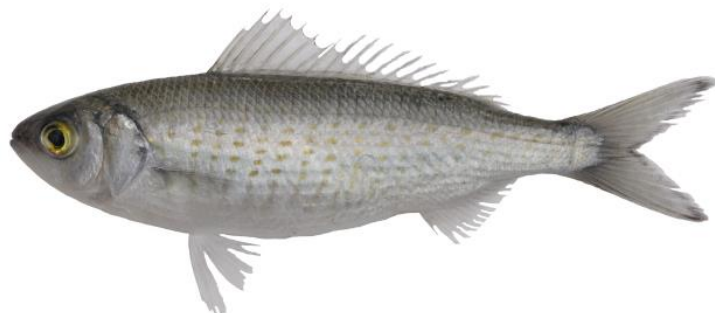


5.161 *Arripis georgianus*, Australian Herring

PERCIFORMES ARRIPIDAE (Australian Salmons)

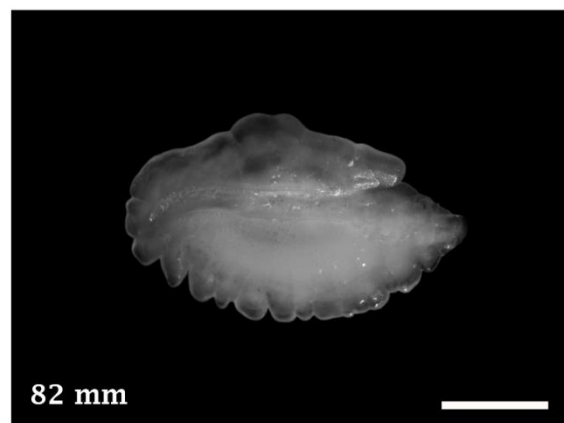
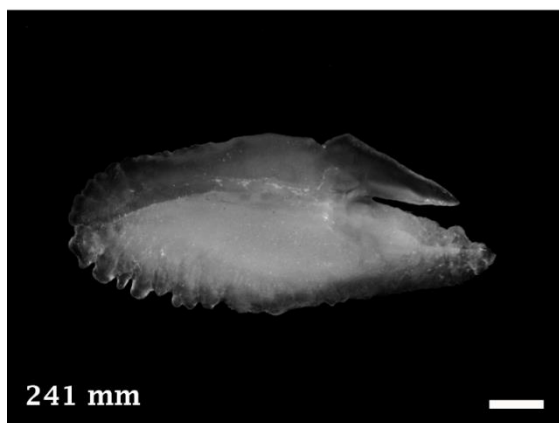
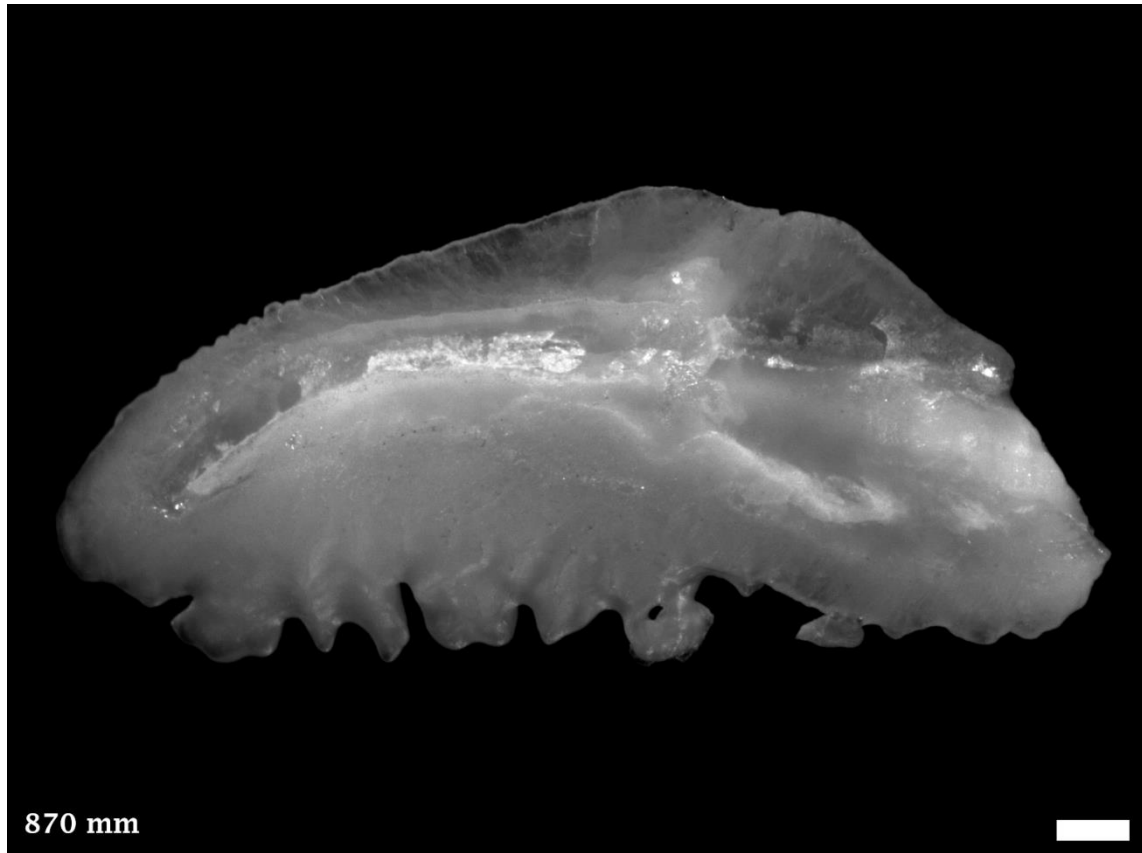


Distribution and Length: Estuarine, coastal and offshore waters from Shark Bay, WA south around to southern NSW, including Tasmania. 410 mm TL.



5.162 *Arripis truttaceus*, Western Australian Salmon

PERCIFORMES ARRIPIDAE (Australian Salmons)

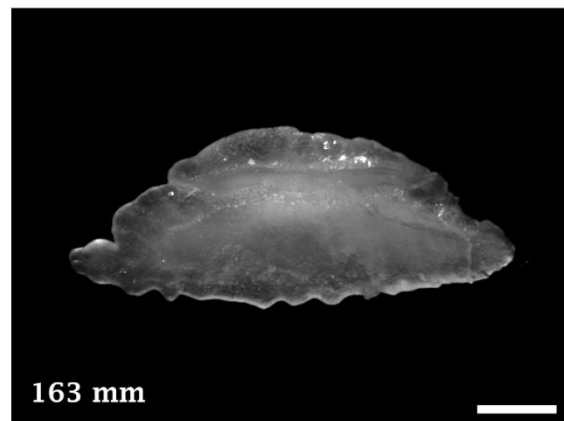
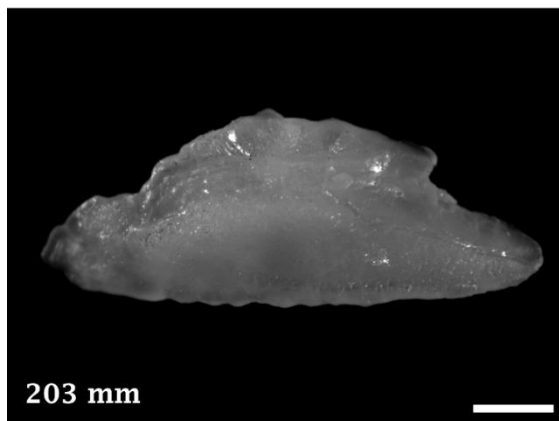
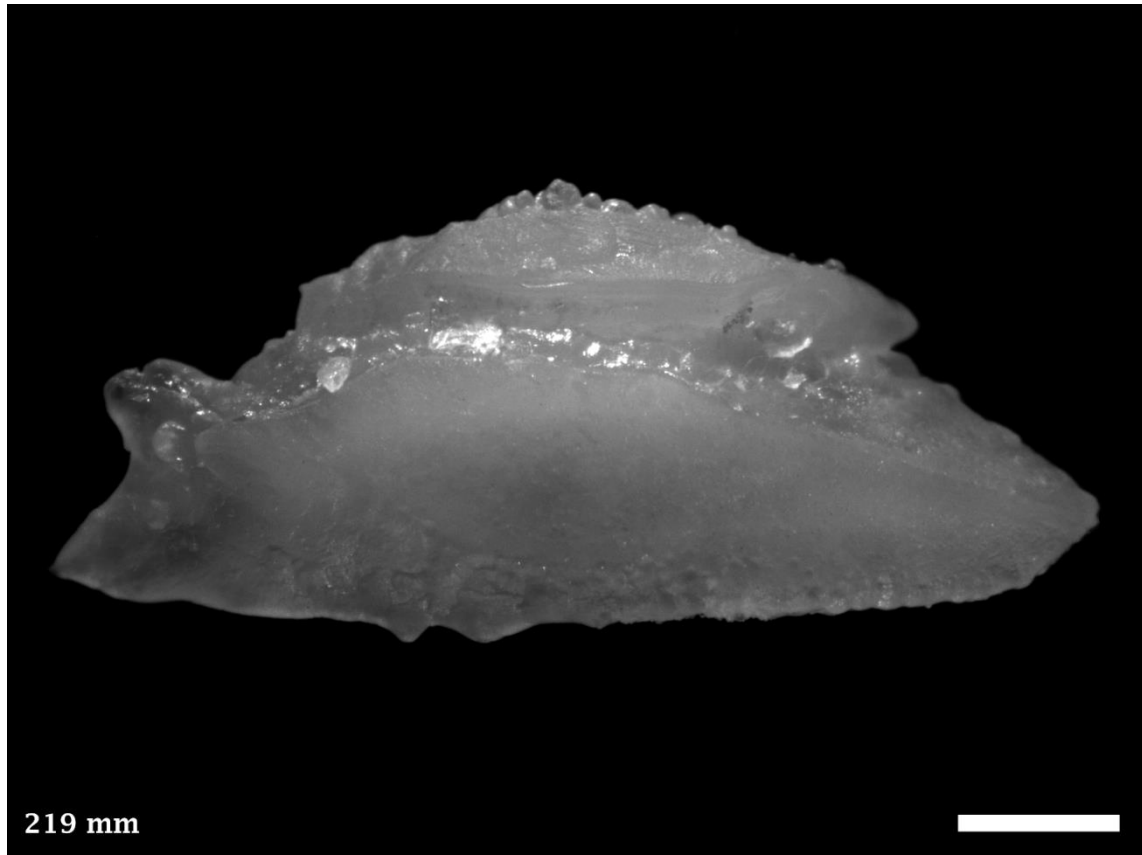


Distribution and Length: Estuarine, coastal and offshore waters from Kalbarri, WA south around to Lakes Entrance, Vic, including Tasmania. 960 mm TL.



5.163 *Amniataba caudavittata*, Yellowtail Grunter

PERCIFORMES TERAPONIDAE (Striped Grunter)

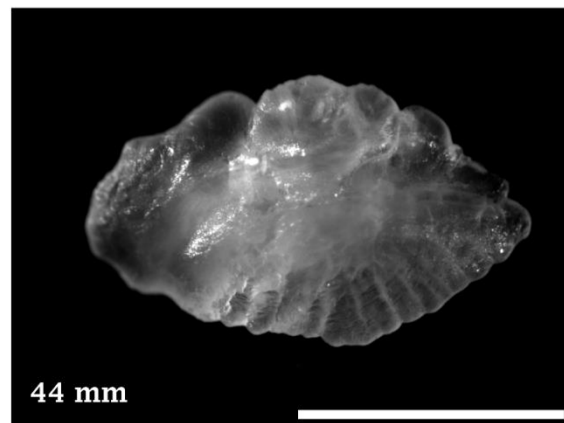
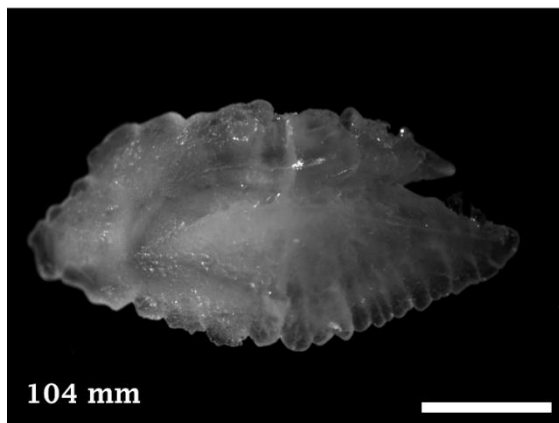
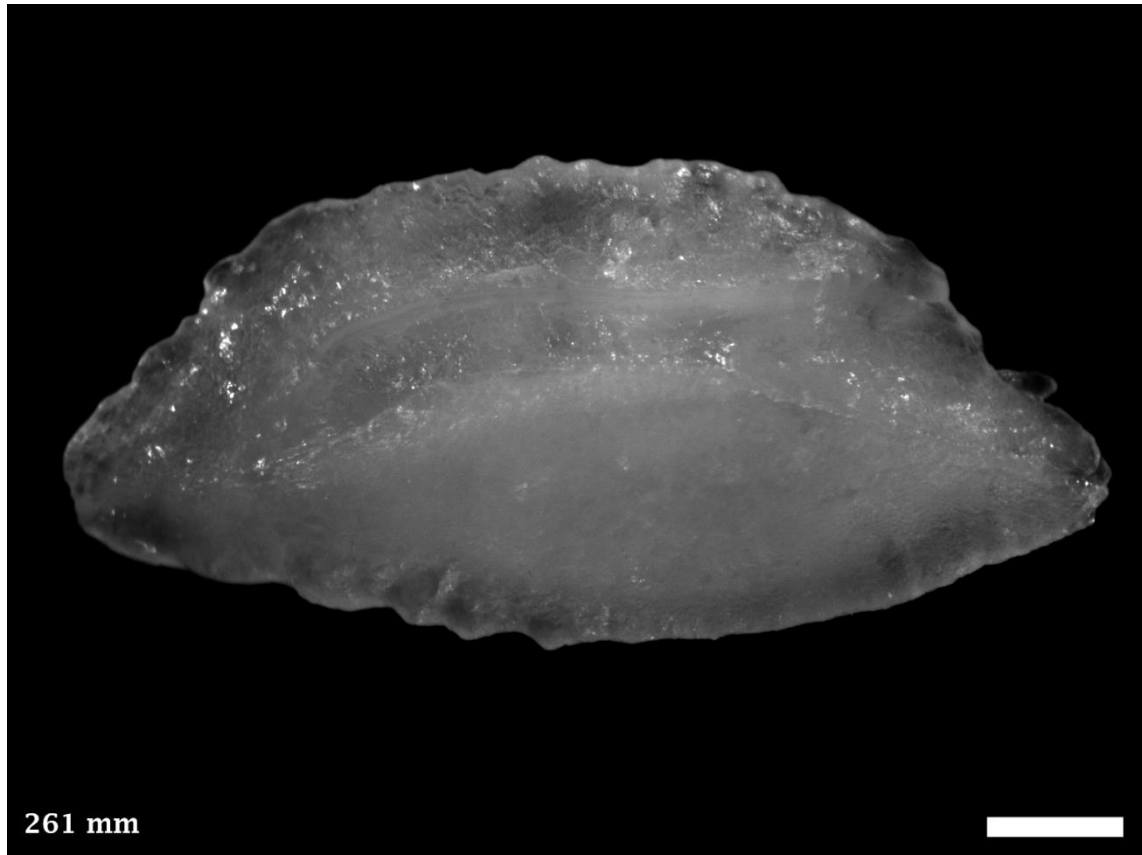


Distribution and Length: Estuarine and coastal waters from Cape Leeuwin, WA north around to Bowen, Qld. 280 mm TL.



5.164 *Pelates octolineatus*, Western Striped Grunter

PERCIFORMES TERAPONIDAE (Striped Grunter)

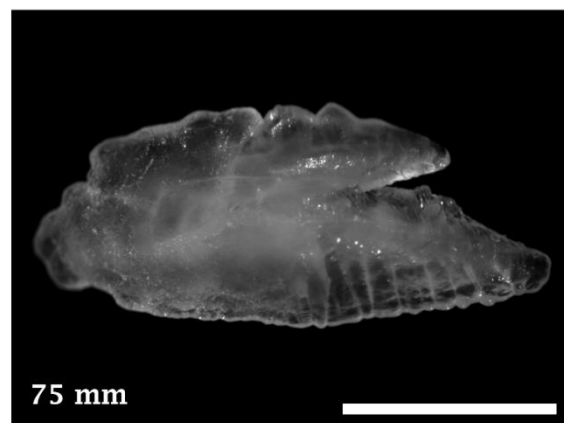
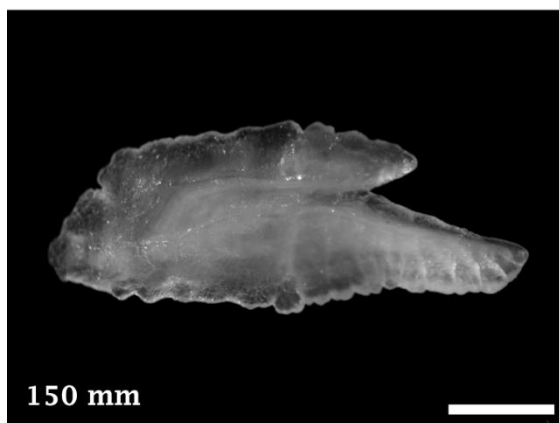
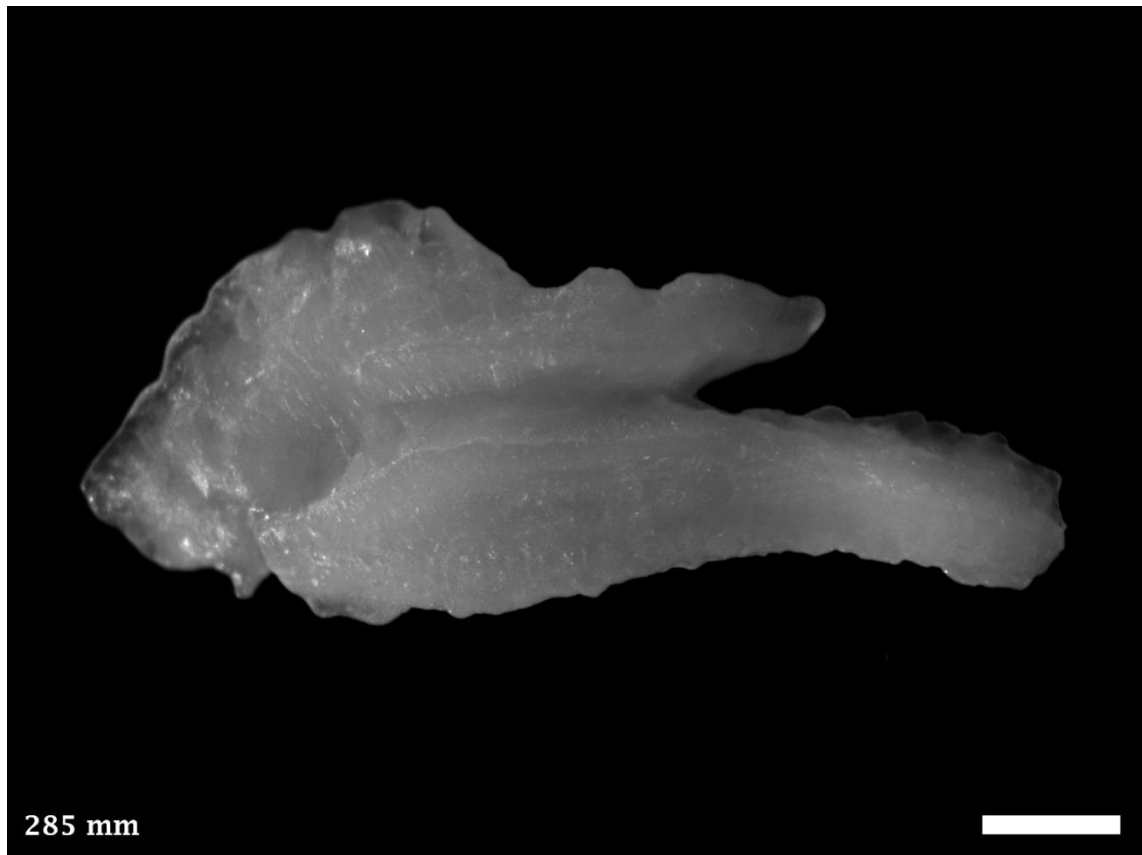


Distribution and Length: Coastal and estuarine waters from Broome, WA south around to Kangaroo Island, SA. 280 mm TL.



5.165 *Pelsartia humeralis*, Sea Trumpeter

PERCIFORMES TERAPONIDAE (Striped Grunter)

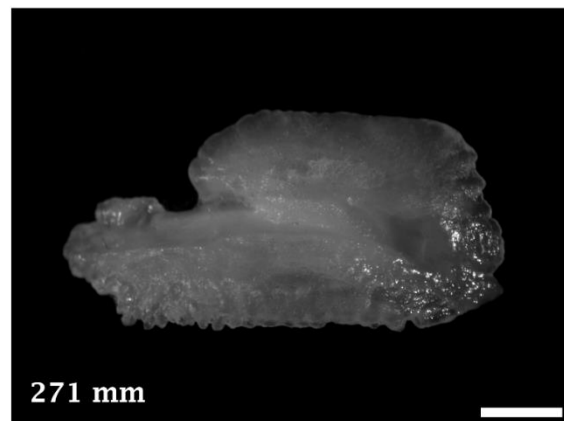
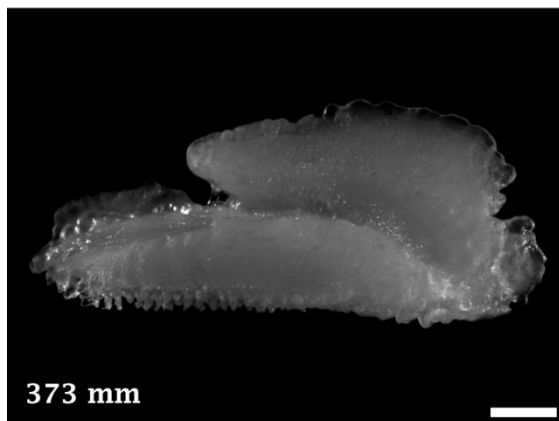
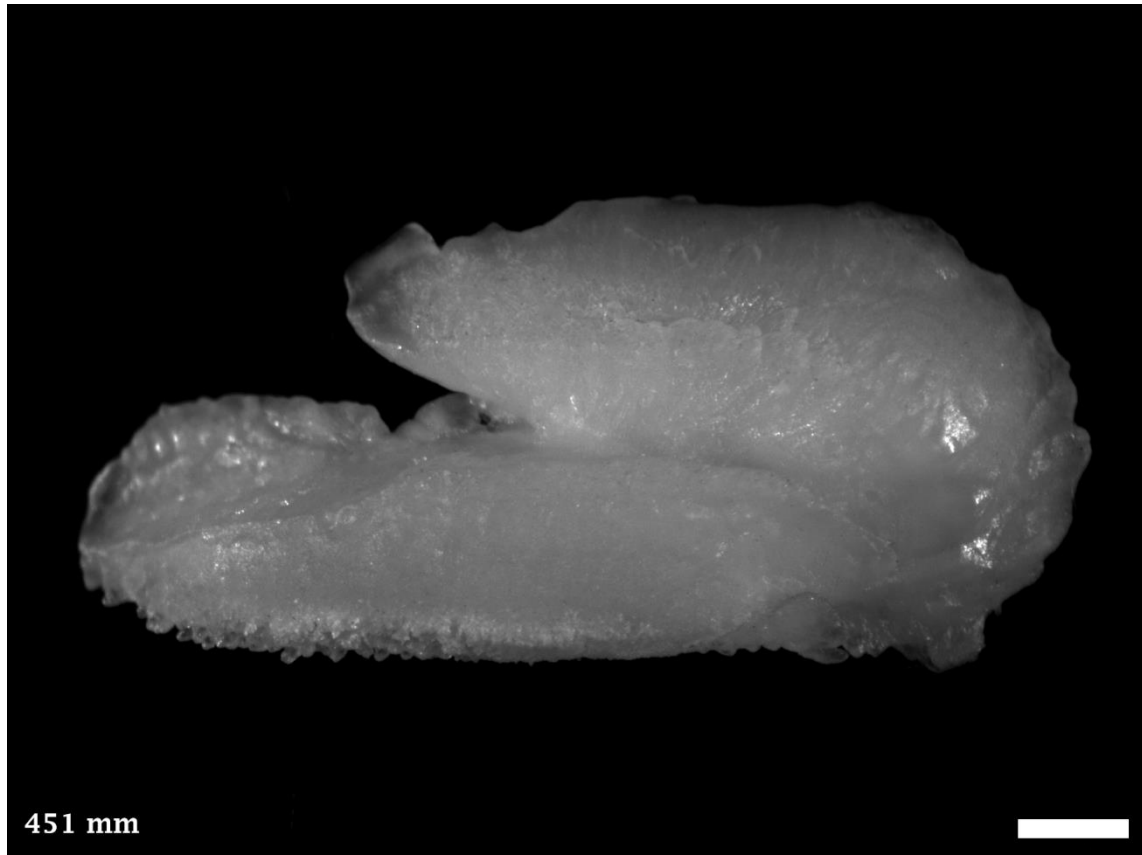


Distribution and Length: Coastal and offshore waters from Houtman Abrolhos, WA south around to Kangaroo Island, SA. 390 mm TL.



5.166 *Oplegnathus woodwardi*, Knifejaw

PERCIFORMES OPLEGNATHIDAE (Knifejaws)

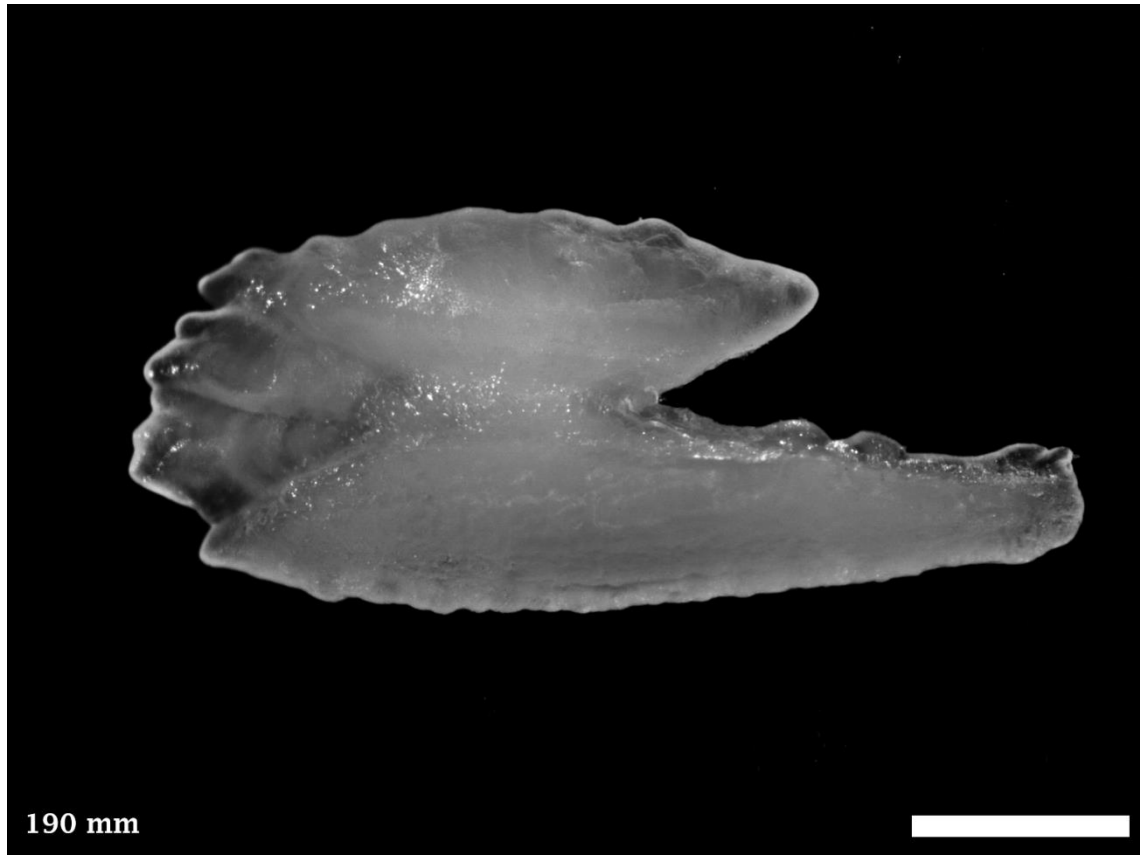


Distribution and Length: Deep offshore waters from Point Quobba, WA south around to southern New South Wales, including Tasmania. Note: Right otoliths. 480 mm TL.



5.167 *Chironemus georgianus*, Western Kelpfish

PERCIFORMES CHIRONEMIDAE (Kelpfishes)

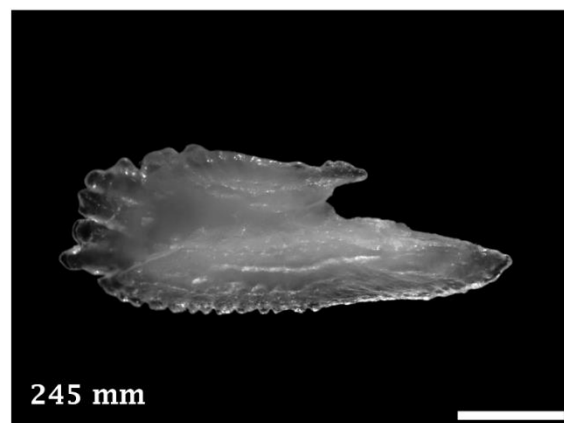
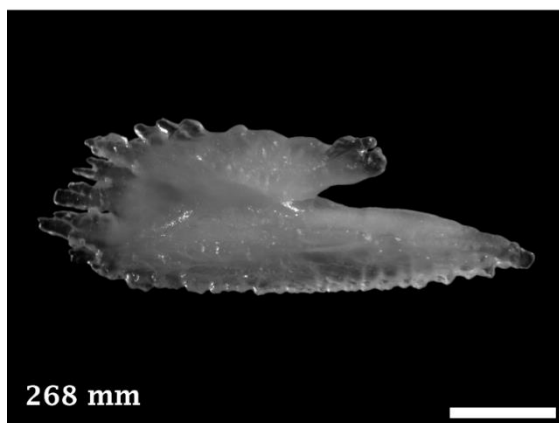
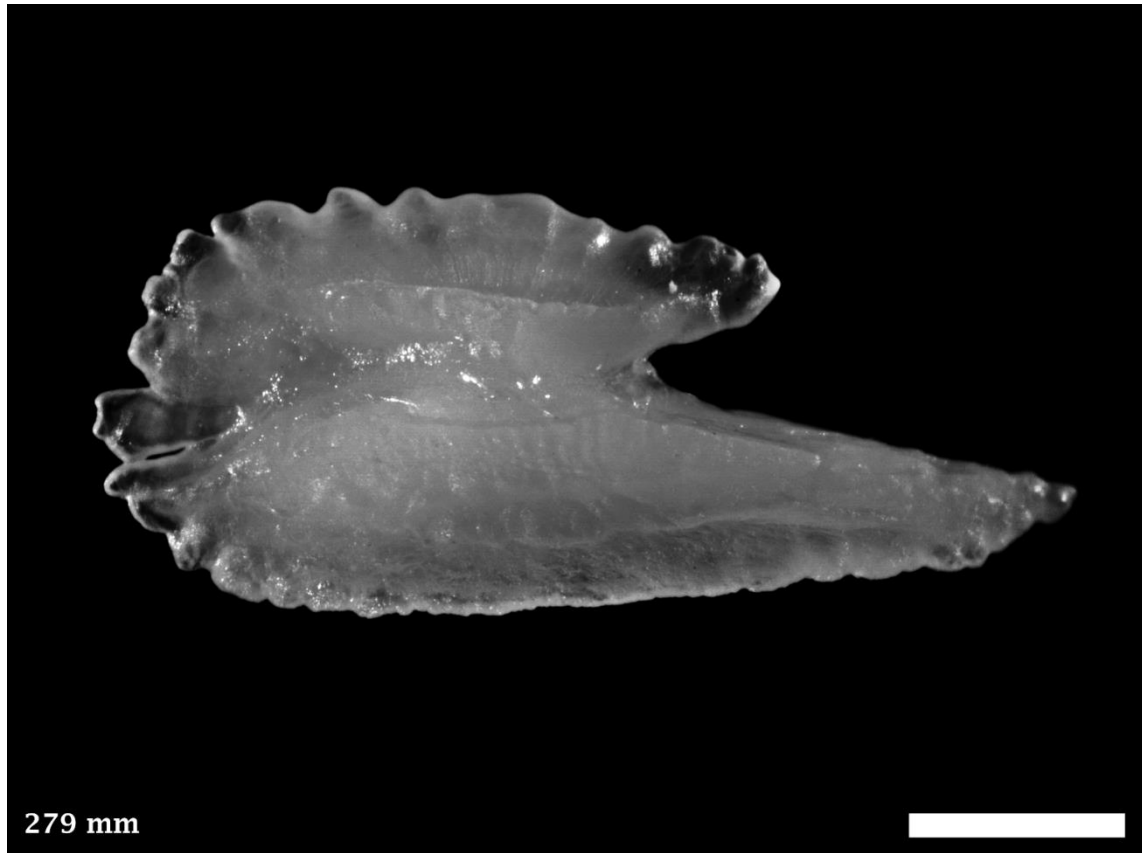


Distribution and Length: Shallow reef and weedy areas from Geographe Bay, WA south around to Wilson's Promontory, Vic, including Tasmania. 210 mm TL.



5.168 *Chironemus maculosus*, Silver Spot

PERCIFORMES CHIRONEMIDAE (Kelpfishes)

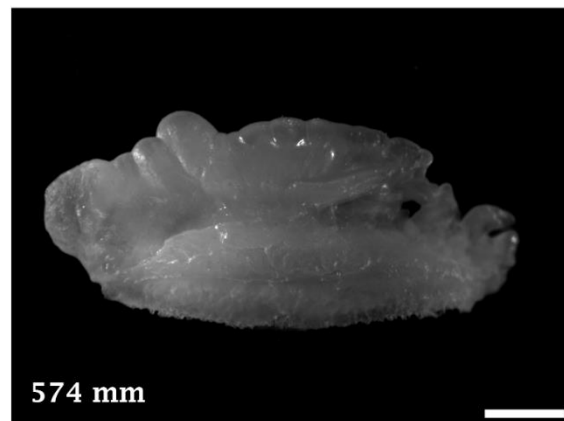
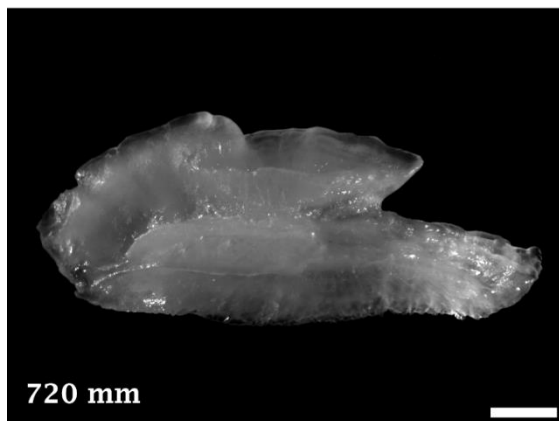
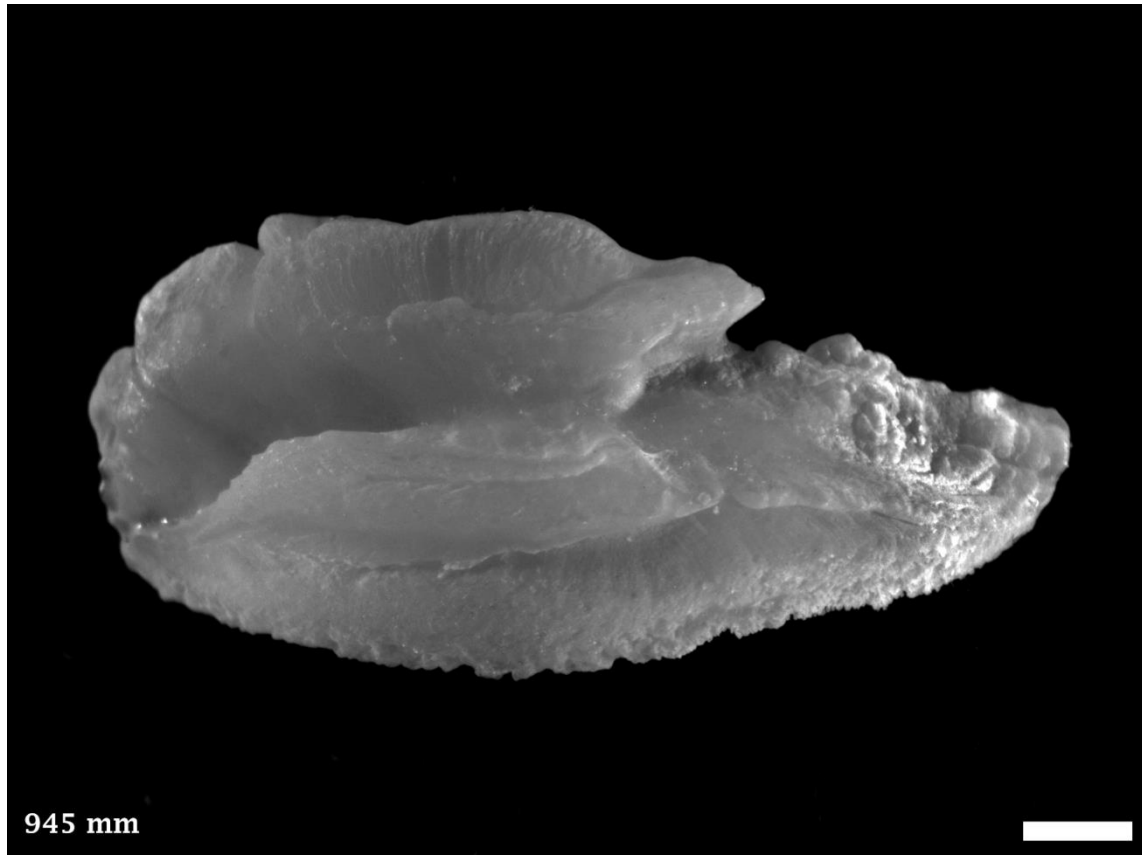


Distribution and Length: Shallow reef and weedy areas from Lancelin, WA south around to NSW, including Tasmania. 400 mm TL.



5.169 *Dactylophora nigricans*, Dusky Morwong

PERCIFORMES CHEILODACTYLIDAE (Morwong)

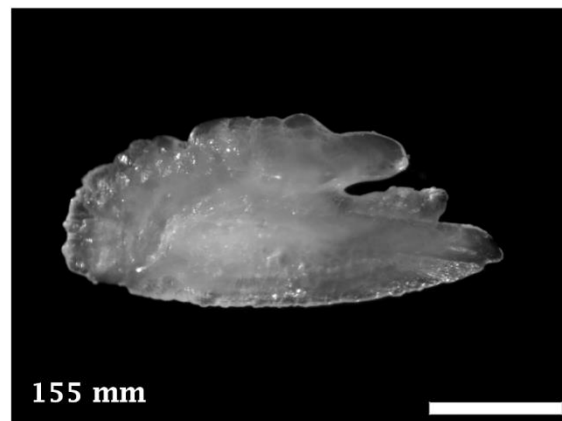
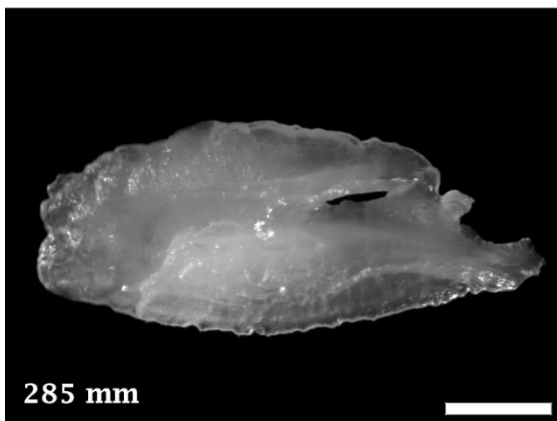
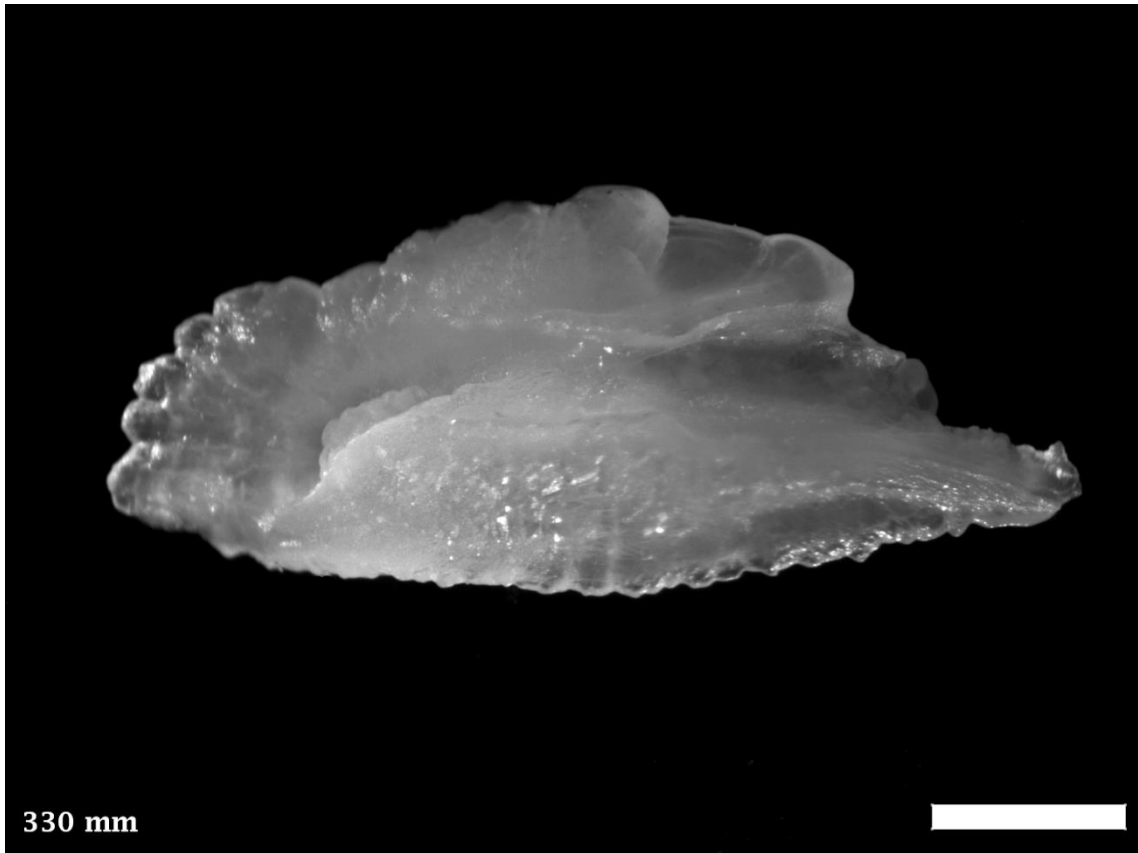


Distribution and Length: Coastal waters from Lancelin, WA south around to northern NSW, including northern Tasmania. 1200 mm TL.



5.170 *Goniistius gibbosus*, Magpie Morwong

PERCIFORMES CHEILODACTYLIDAE (Morwong)

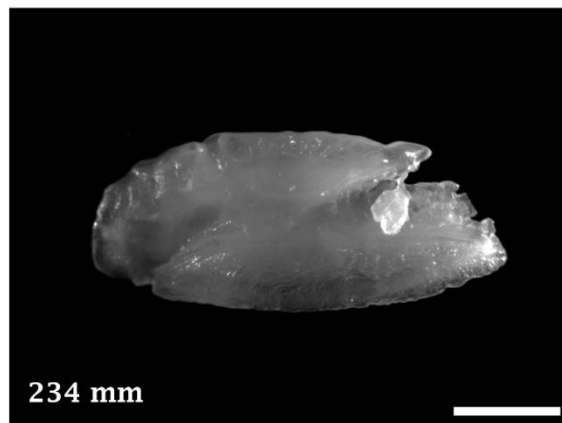
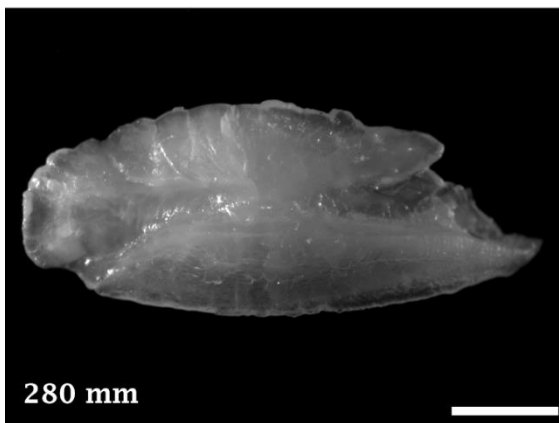
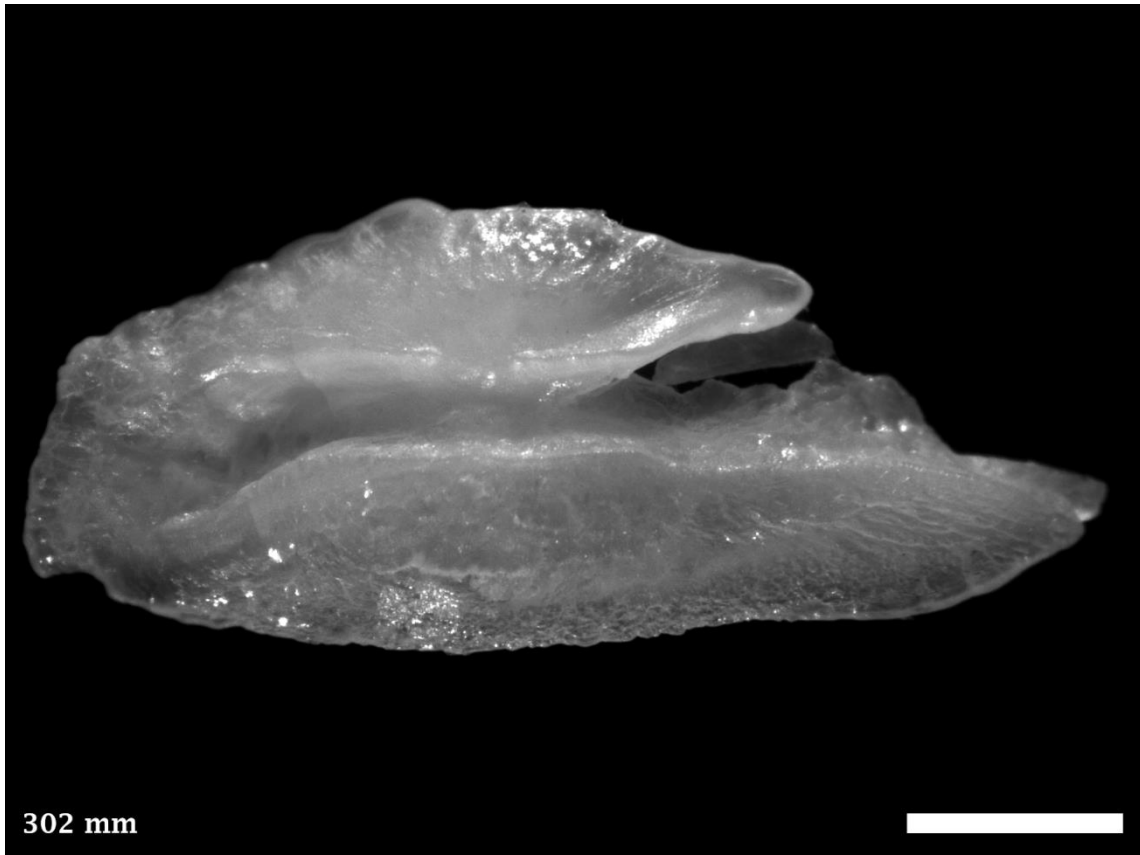


Distribution and Length: Reefs and coastal waters from Shark Bay, WA south around to Recherche Archipelago, WA. 350 mm TL.



5.171 *Goniistius rubrolabiatus*, Redlip Morwong

PERCIFORMES CHEILODACTYLIDAE (Morwong)

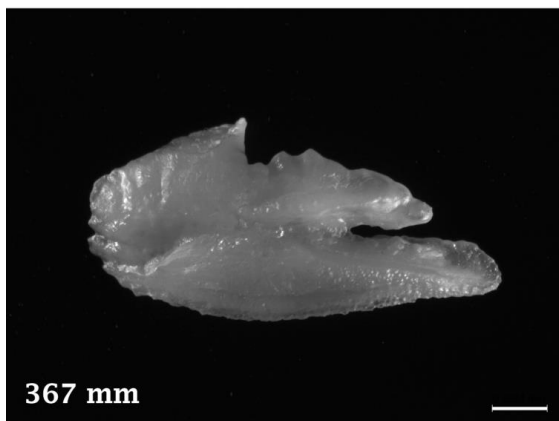
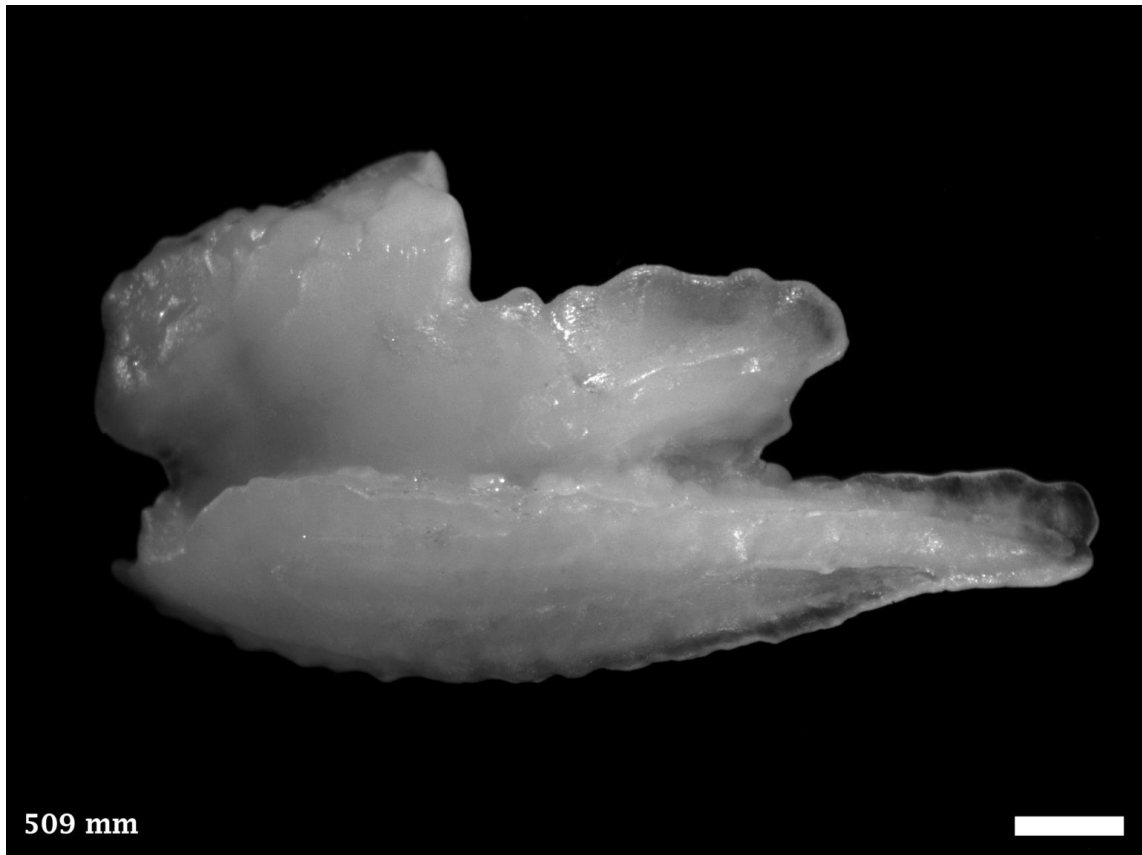


Distribution and Length: Coastal waters from Coral Bay, WA south around to Ceduna, SA. 750 mm TL.



5.172 *Nemadactylus macropterus*, Jackass Morwong

PERCIFORMES CHEILODACTYLIDAE (Morwong)

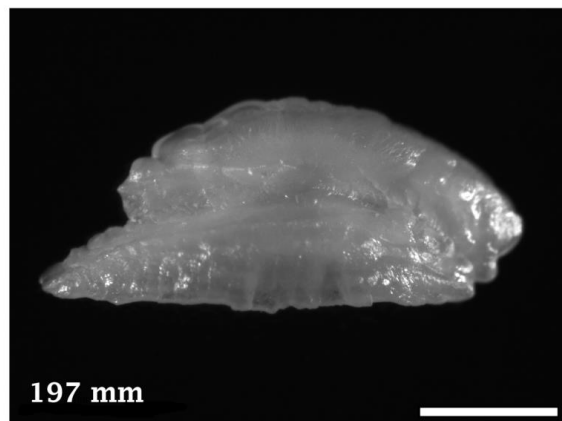
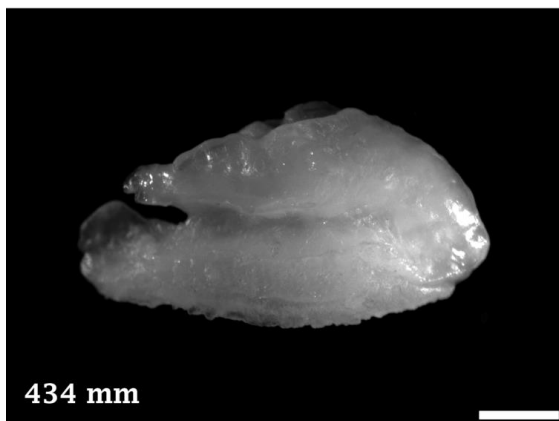
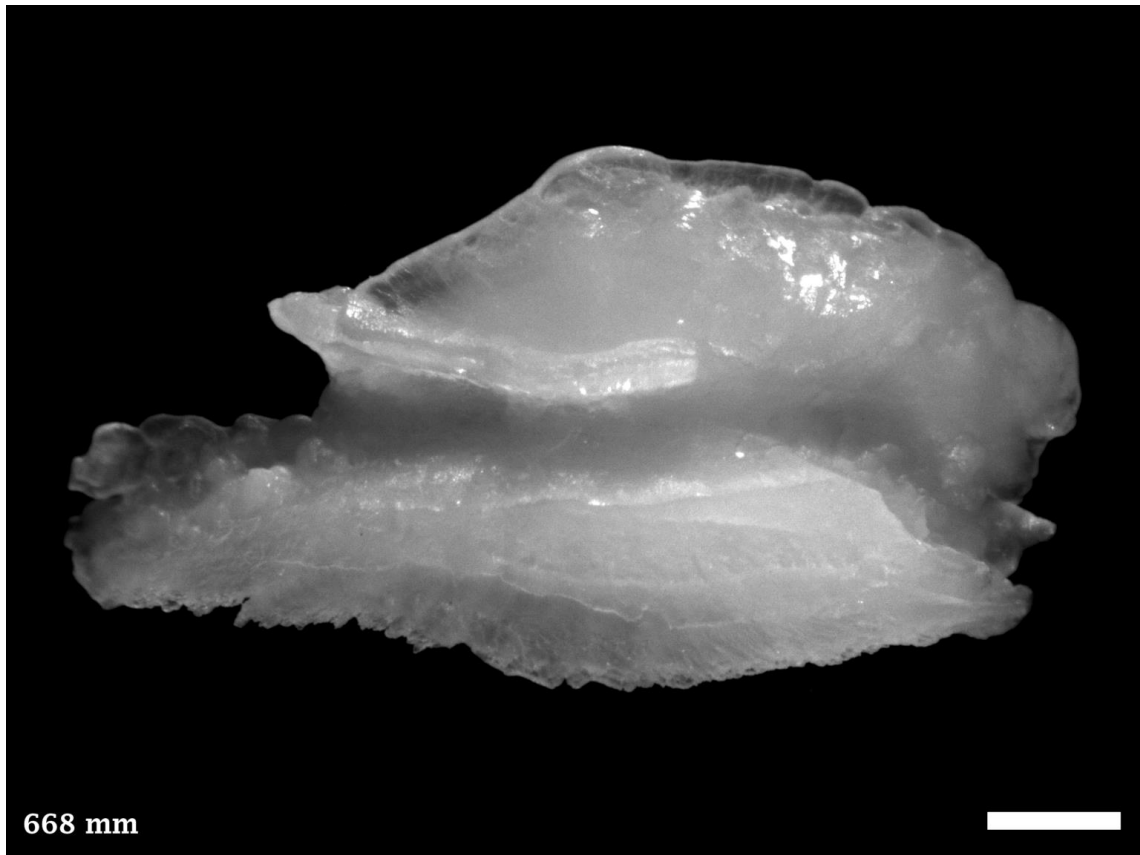


Distribution and Length: Coastal and offshore waters from Rottnest Island, WA south around to northern New South Wales. 700 mm TL.



5.173 *Nemadactylus valenciennesi*, Blue Morwong

PERCIFORMES CHEILODACTYLIDAE (Morwong)

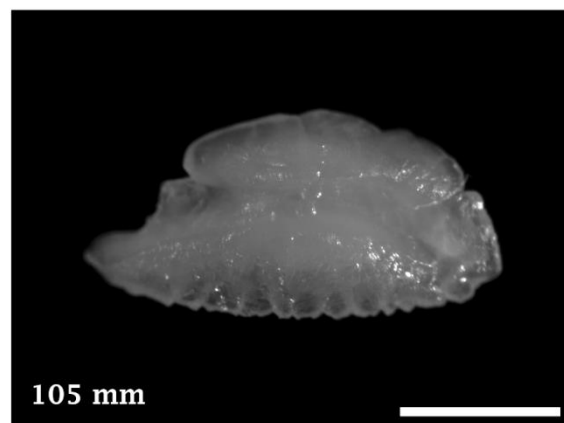
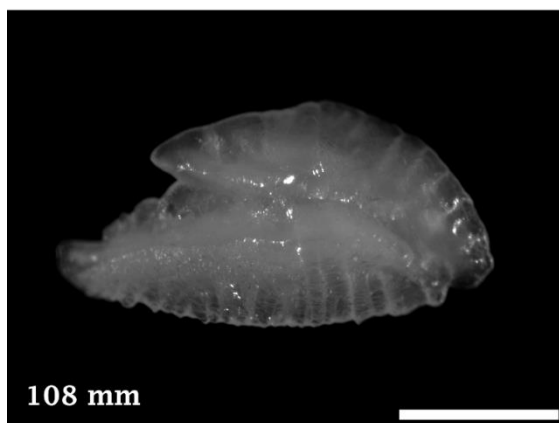
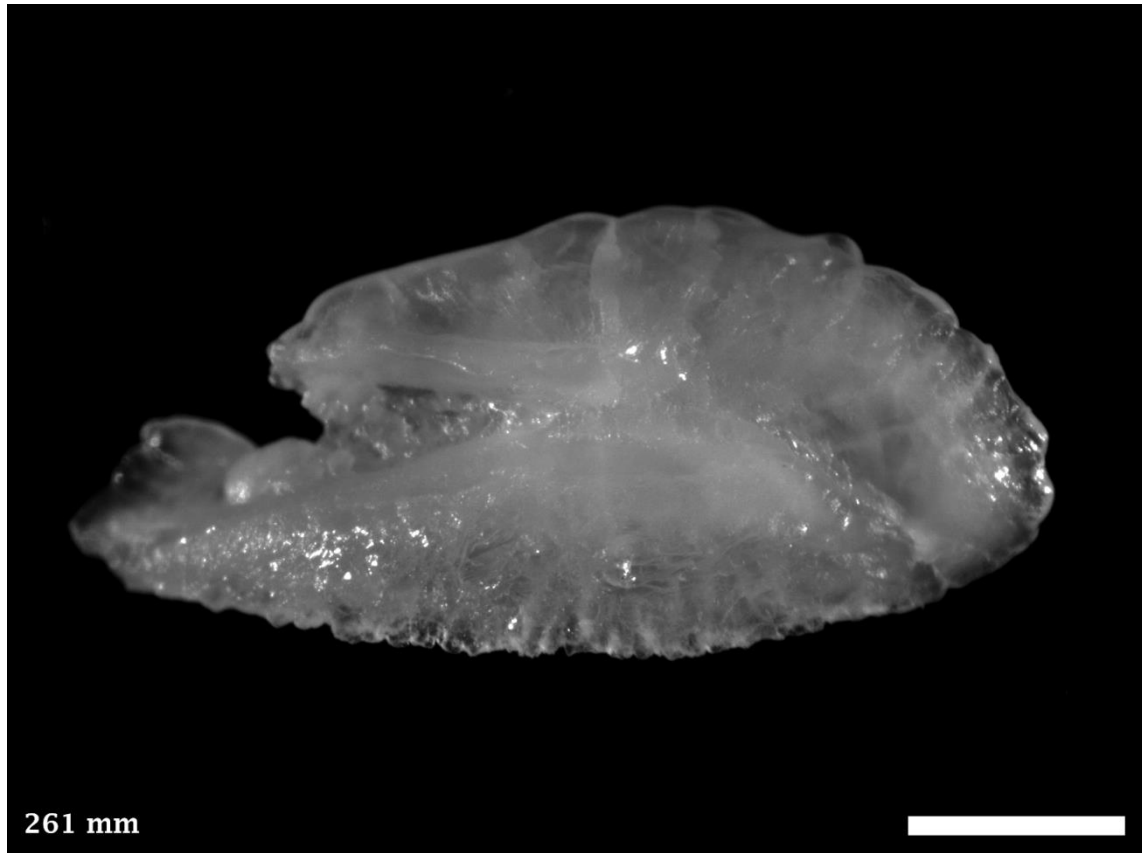


Distribution and Length: Coastal and offshore waters from Lancelin, WA south around to northern New South Wales. Note: Right otoliths. 1000 mm TL.



5.174 *Pseudogoniistius nigripes*, Magpie Perch

PERCIFORMES CHEILODACTYLIDAE (Morwong)

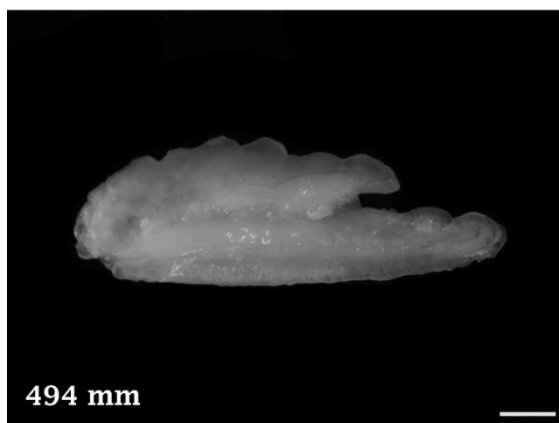
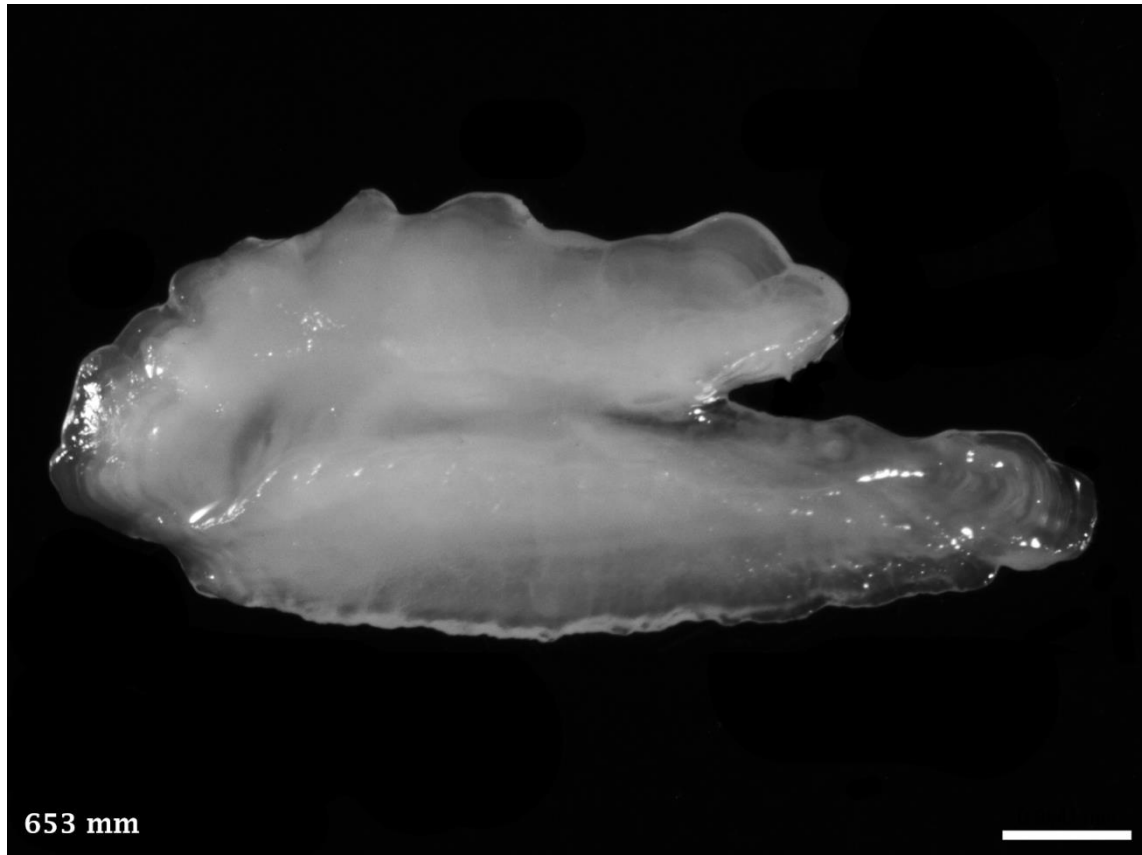


Distribution and Length: Reefs and coastal waters from Albany, WA south around to Kiama, NSW, including Tasmania. Note: Right otoliths. 410 mm TL.



5.175 *Latris lineata*, Striped Trumpeter

PERCIFORMES LATRIDAE (Trumpeters)

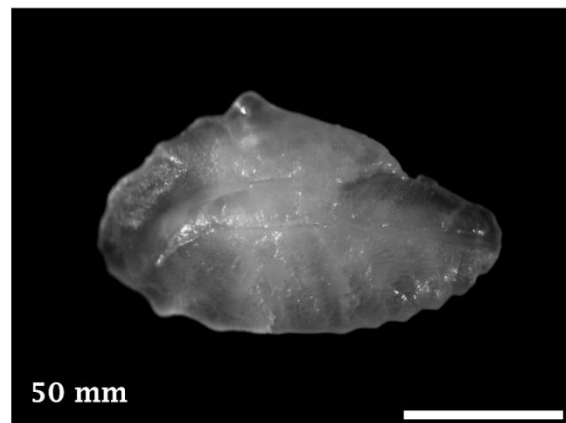
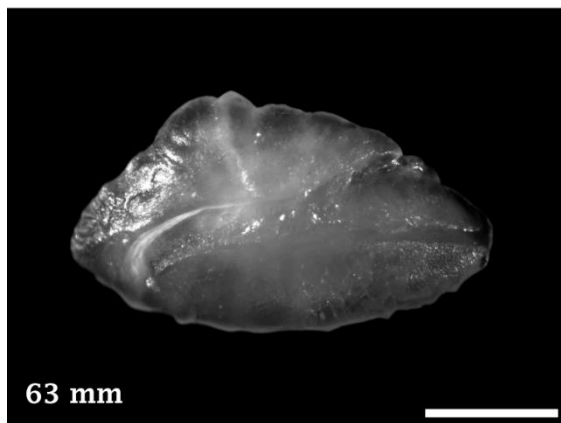
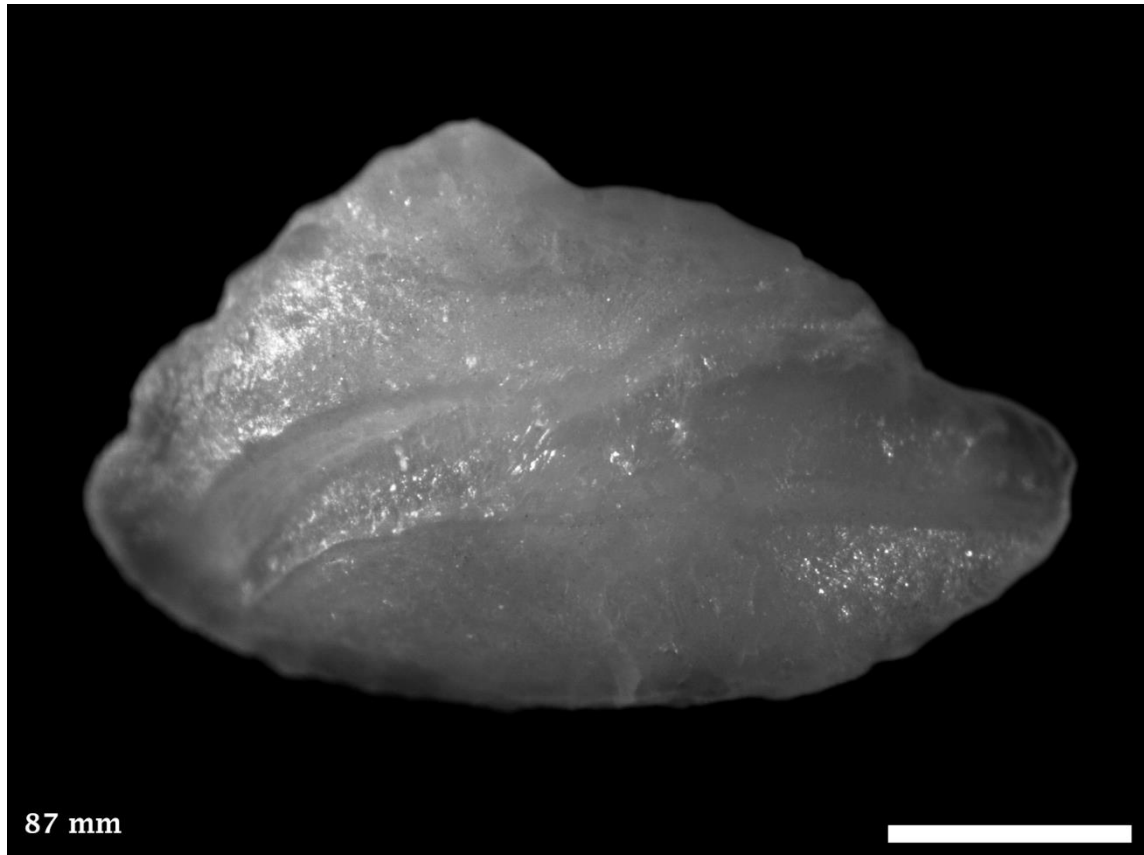


Distribution and Length: Coastal and offshore waters from Albany, WA south around to southern New South Wales, including Tasmania. 1200 mm TL.



5.176 *Chromis klunzingeri*, Blackhead Puller

PERCIFORMES POMACENTRIDAE (Damselfishes)

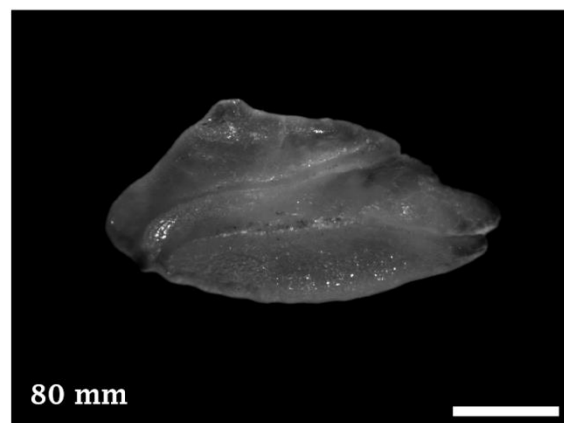
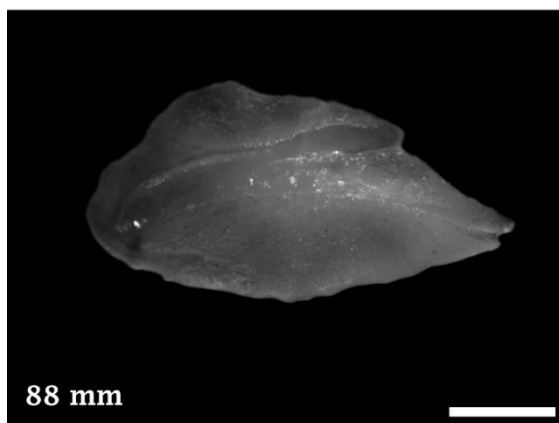
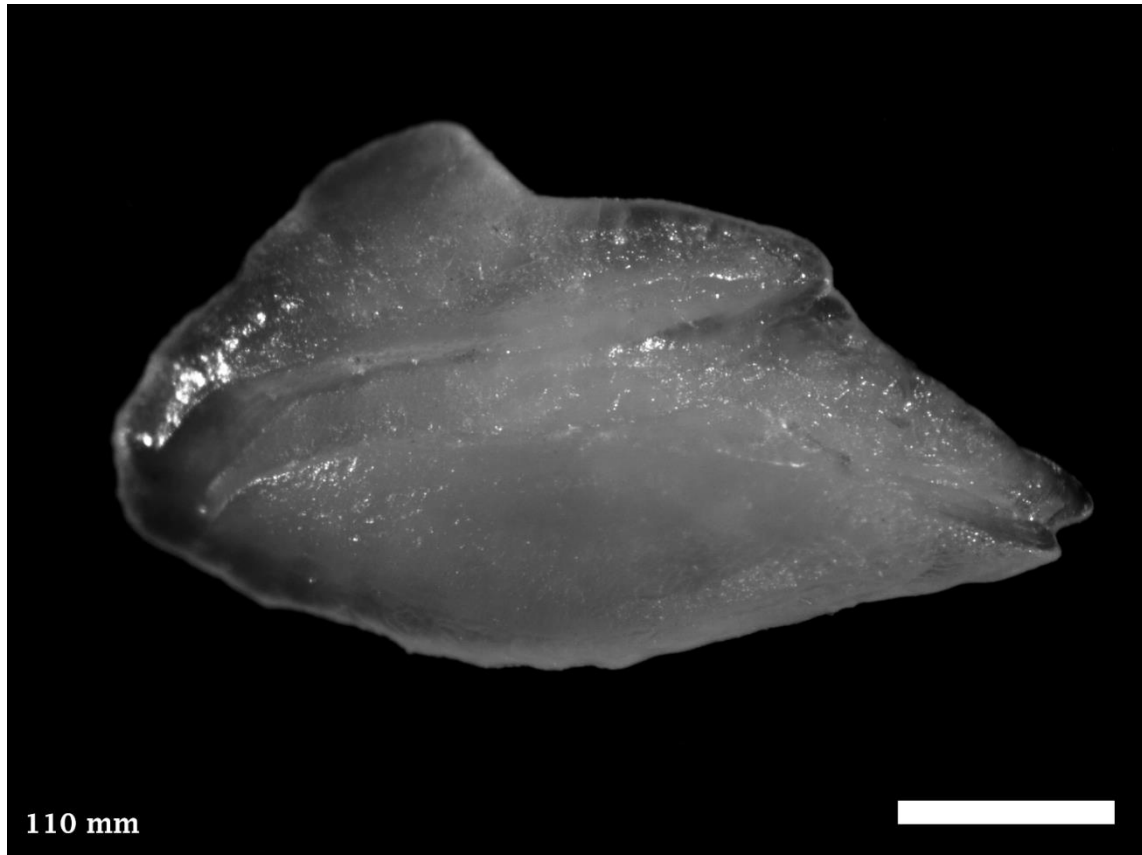


Distribution and Length: Coastal reefs from Houtman Abrolhos, WA south to Recherche Archipelago, WA. 120 mm TL.



5.177 *Chromis westaustralis*, West Australian Puller

PERCIFORMES POMACENTRIDAE (Damselfishes)

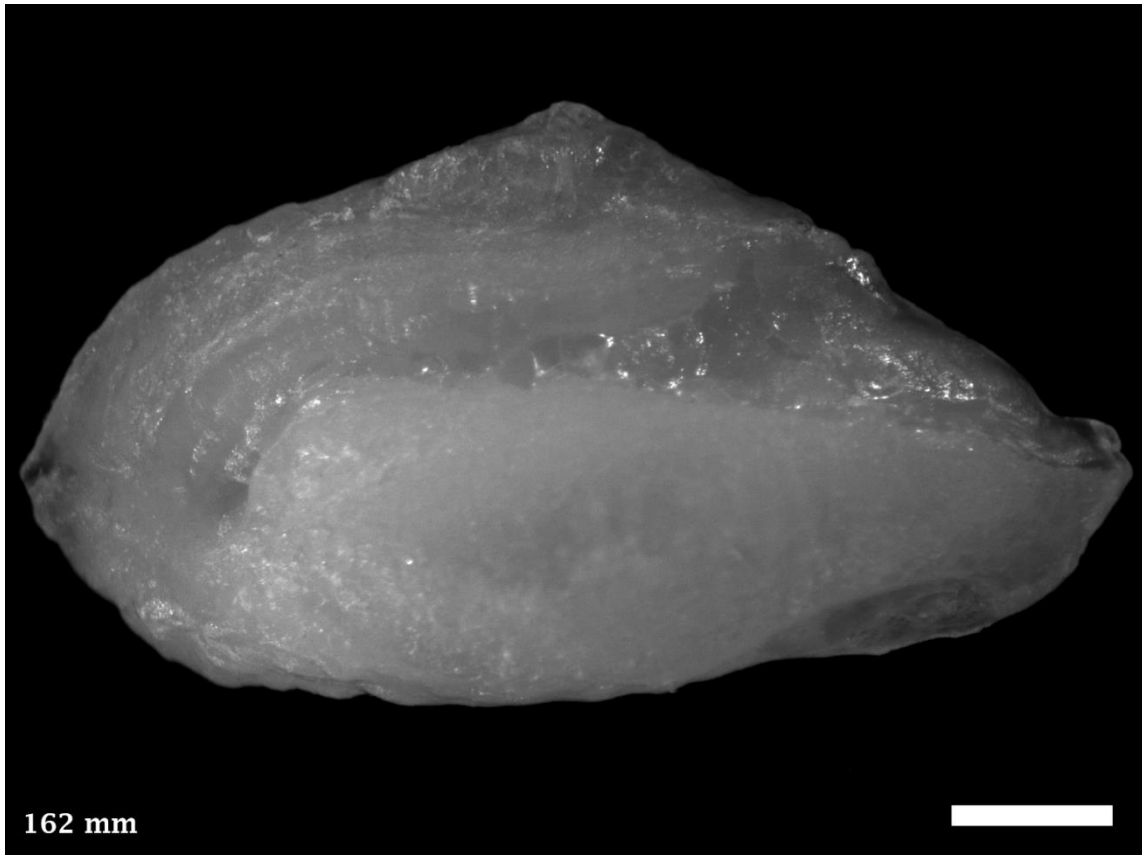


Distribution and Length: Coastal reefs from North West Cape, WA south to Recherche Archipelago, WA. 120 mm TL.

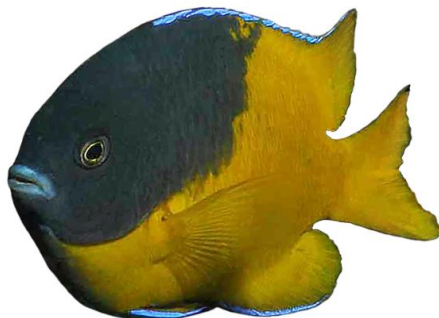


5.178 *Parma bicolor*, Bicolor Scalyfin

PERCIFORMES POMACENTRIDAE (Damselfishes)

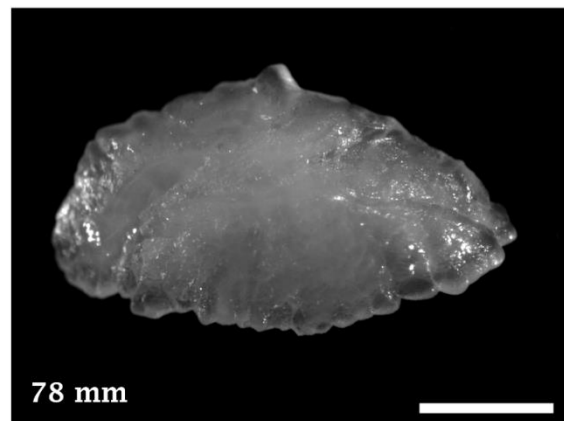
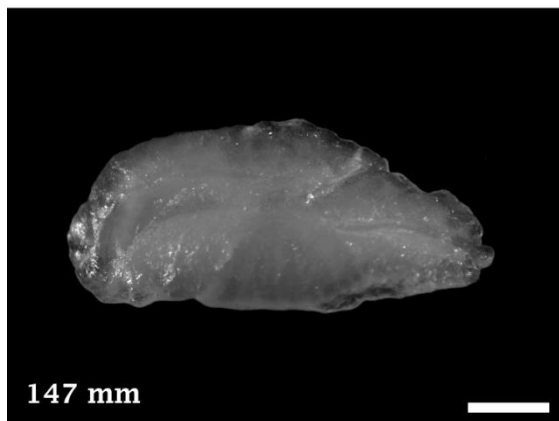
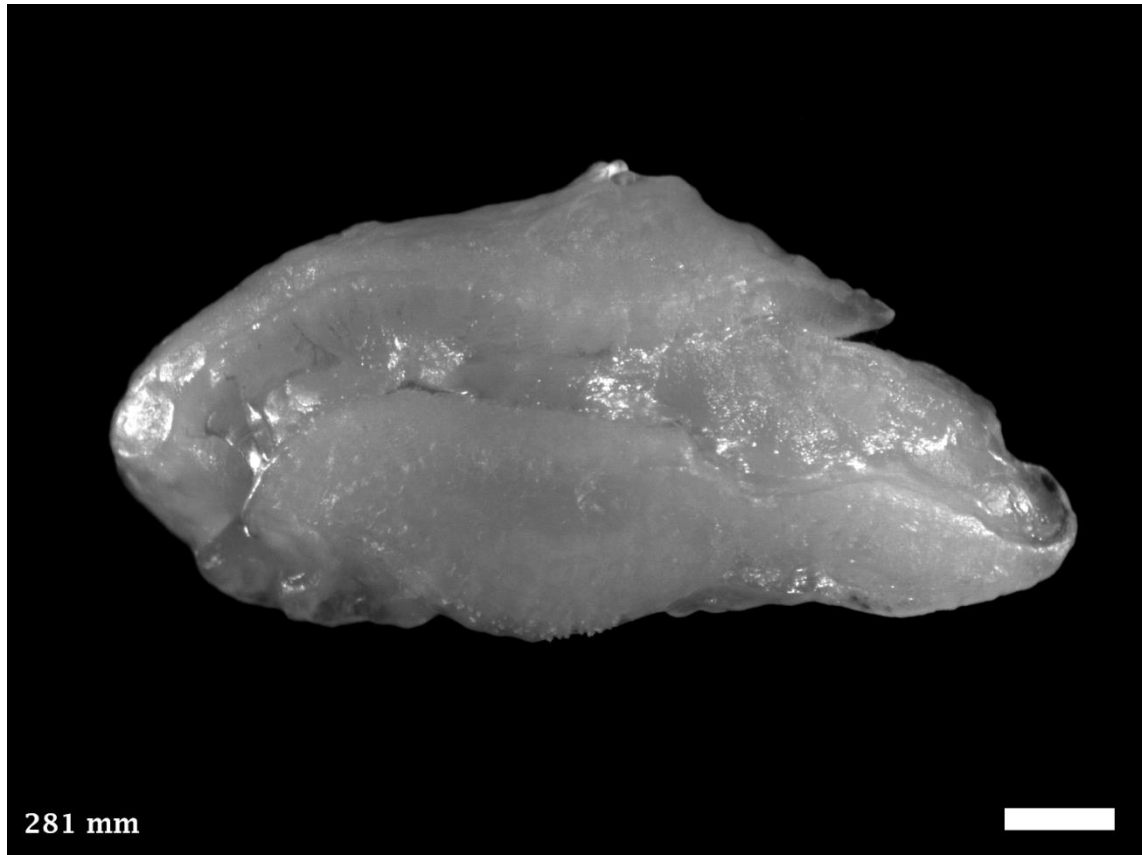


Distribution and Length: Coastal reefs from Rottnest Island, WA south to Recherche Archipelago, WA. 200 mm TL.



5.179 *Parma mccullochi*, McCulloch's Scalyfin

PERCIFORMES POMACENTRIDAE (Damselfishes)

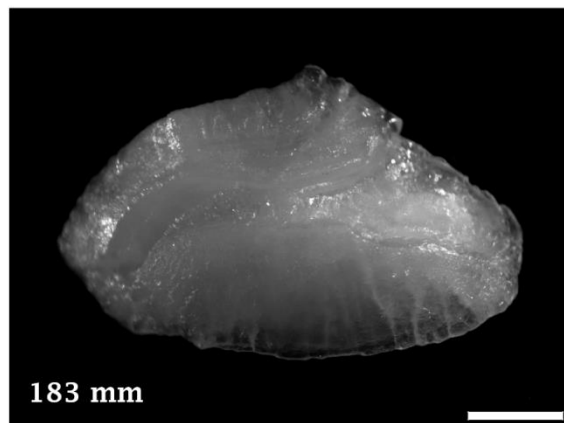
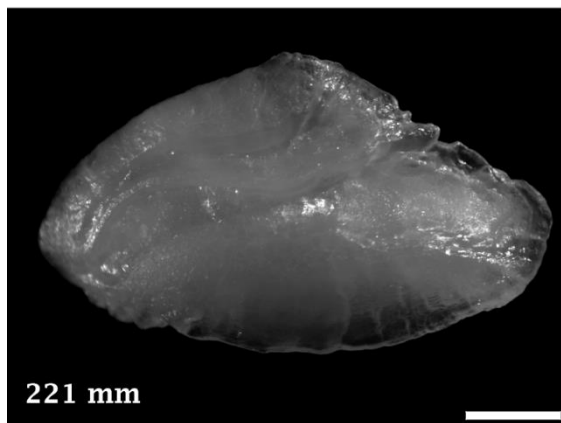
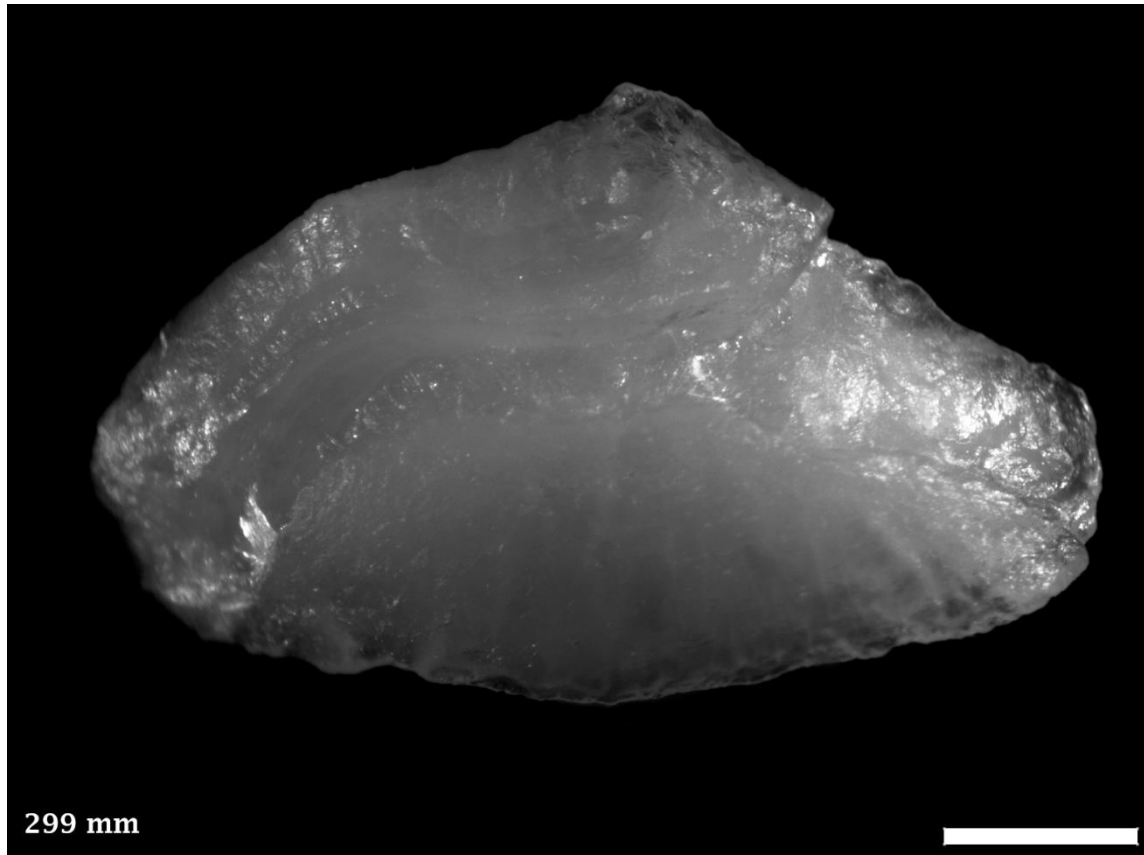


Distribution and Length: Coastal reefs from Houtman Abrolhos, WA south to Recherche Archipelago, WA. 300 mm TL.



5.180 *Parma occidentalis*, Western Scalyfin

PERCIFORMES POMACENTRIDAE (Damselfishes)

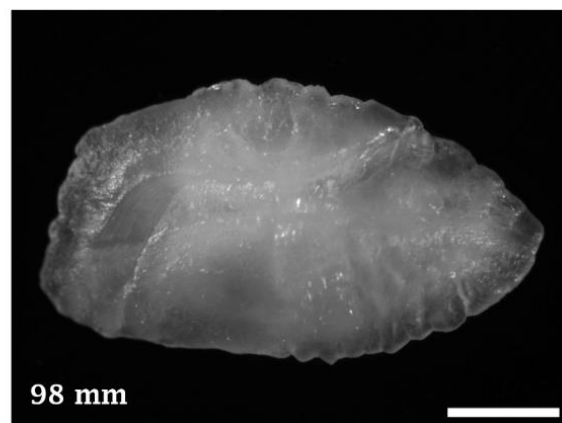
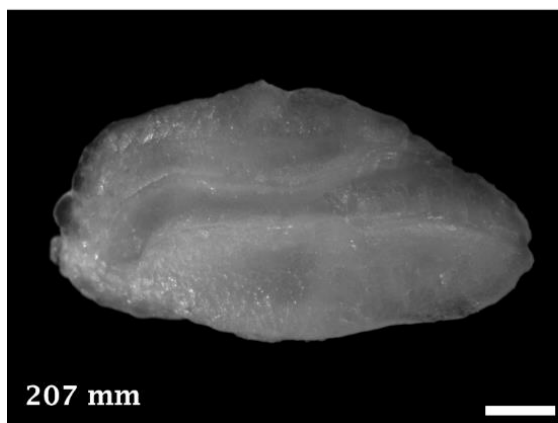
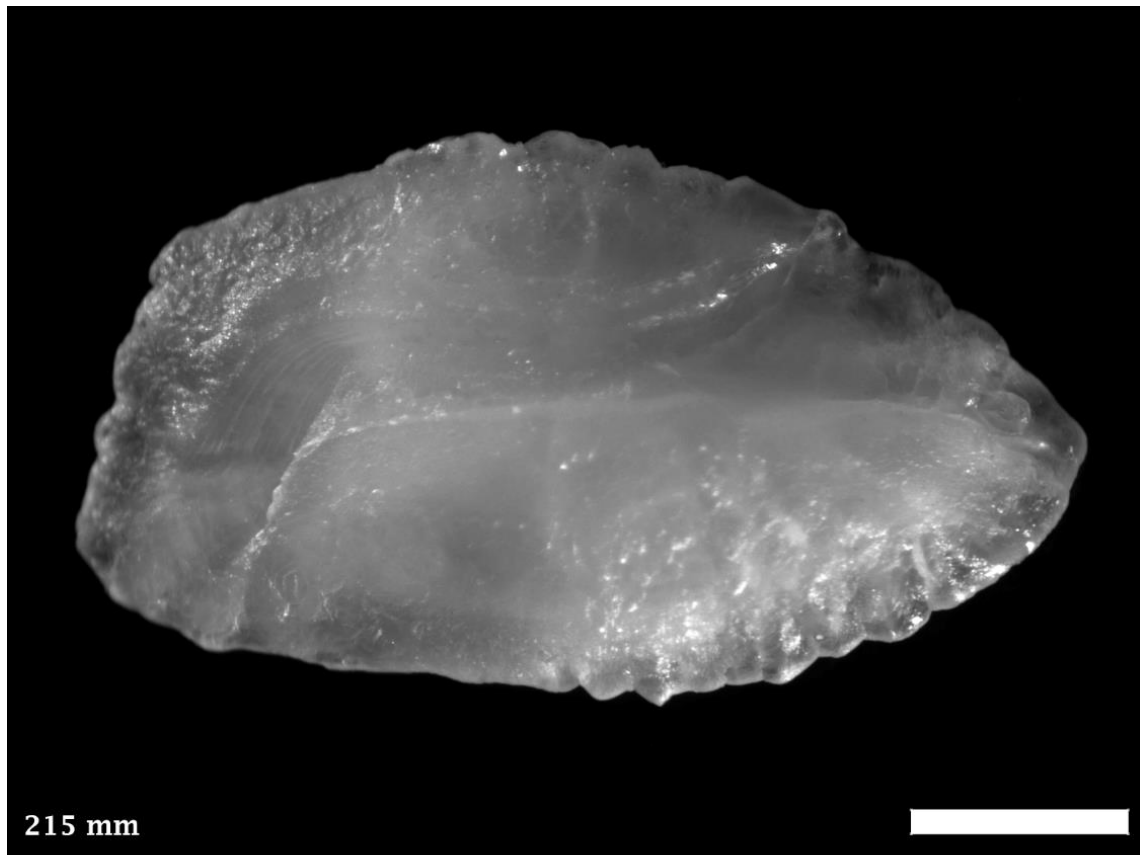


Distribution and Length: Coastal reefs from Coral Bay, WA south to Cape Leeuwin, WA. 300 mm TL.



5.181 *Parma victoriae*, Scalyfin

PERCIFORMES POMACENTRIDAE (Damselfishes)

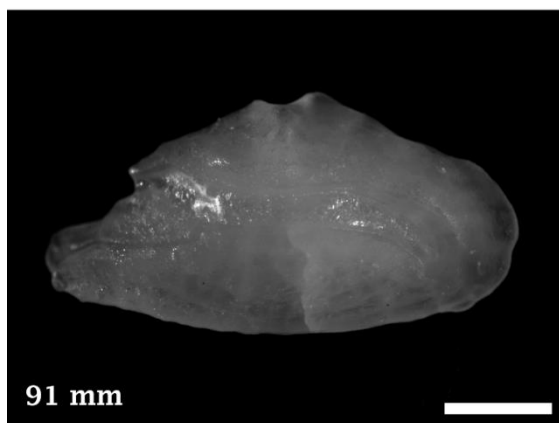
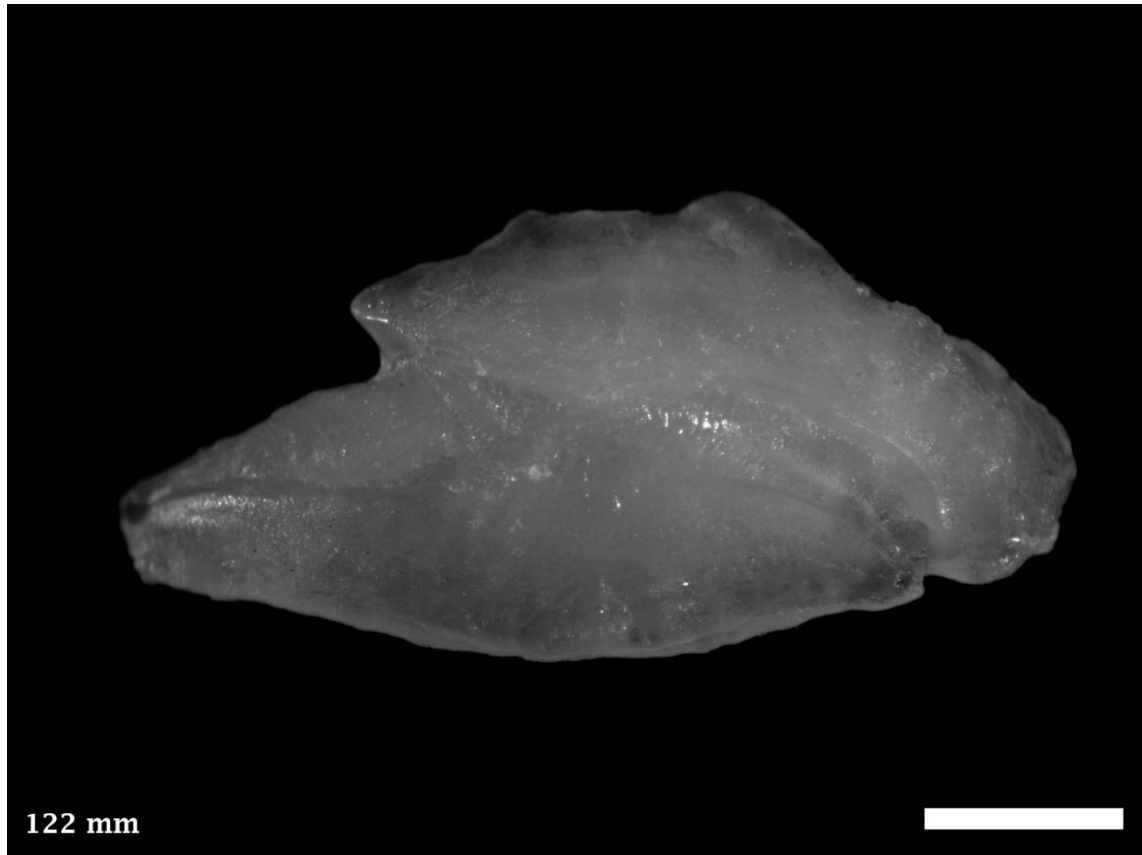


Distribution and Length: Coastal reefs from Dongara, WA south around to Wilsons Promontory, Victoria, including northern Tasmania. 250 WA.mm TL.



5.182 *Pomacentrus milleri*, Miller's Damselfish

PERCIFORMES POMACENTRIDAE (Damselfishes)

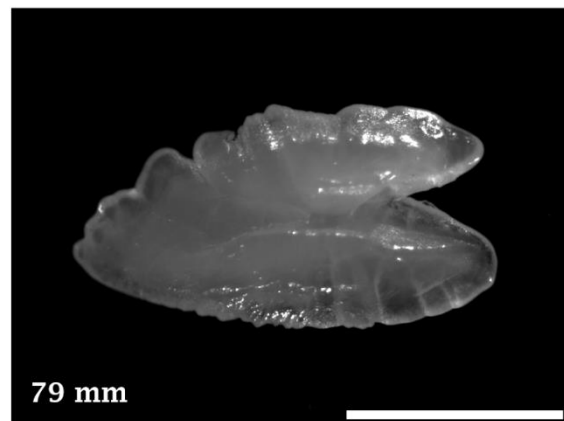
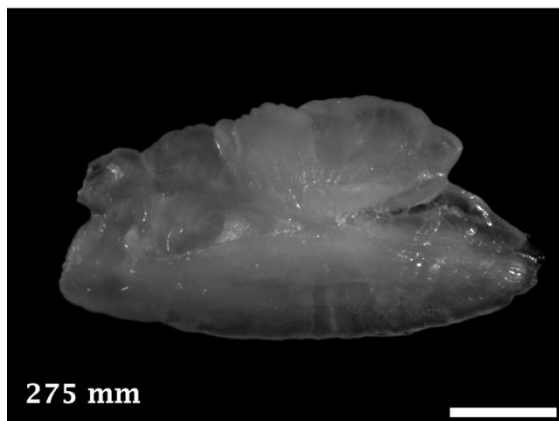
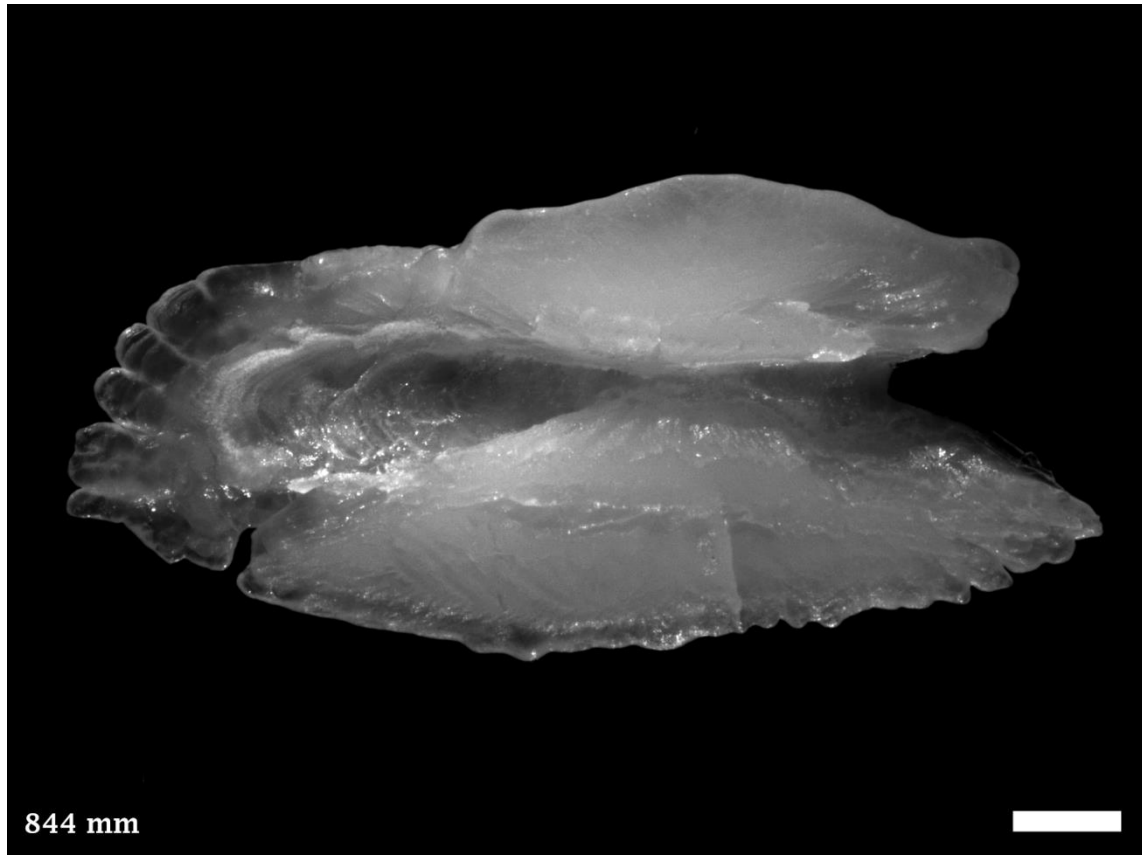


Distribution and Length: Coastal reefs from Rottnest Island, WA north around to Northern Territory. Note: Right otoliths. 120 mm TL.



5.183 *Achoerodus gouldii*, Western Blue Groper

PERCIFORMES LABRIDAE (Wrasses)

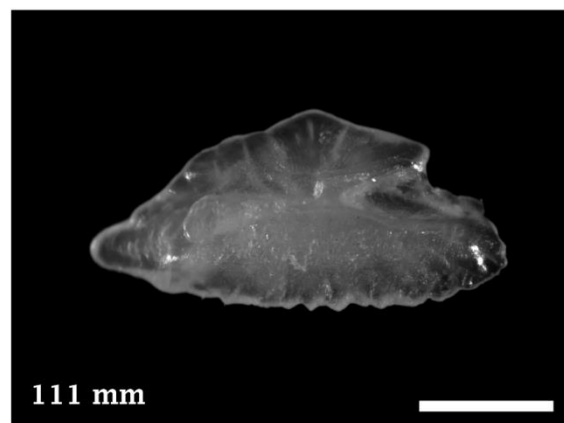
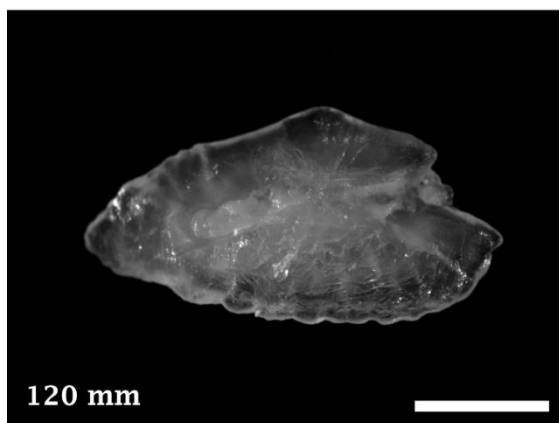
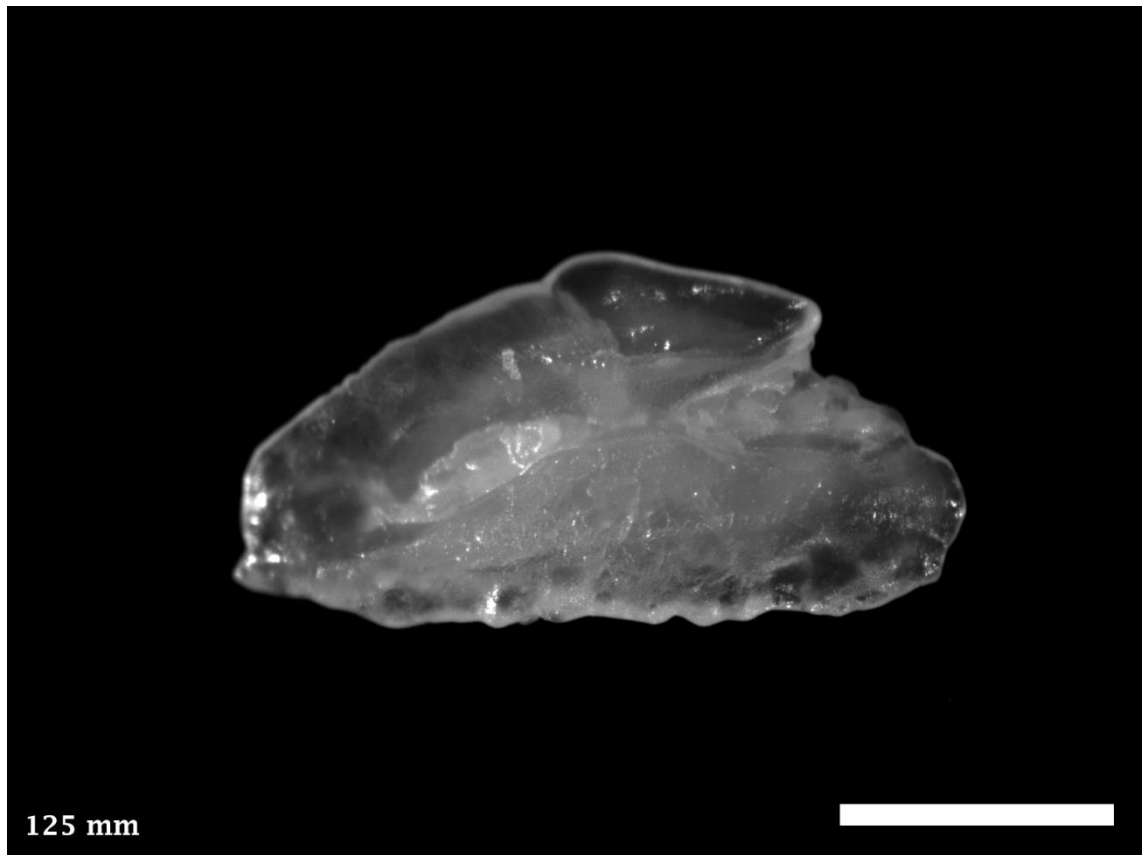


Distribution and Length: Coastal waters from Houtman Abrolhos, WA south around to Port Phillip Bay, Victoria. 1750 mm TL.



5.184 *Austrolabrus maculatus*, Blackspotted Wrasse

PERCIFORMES LABRIDAE (Wrasses)

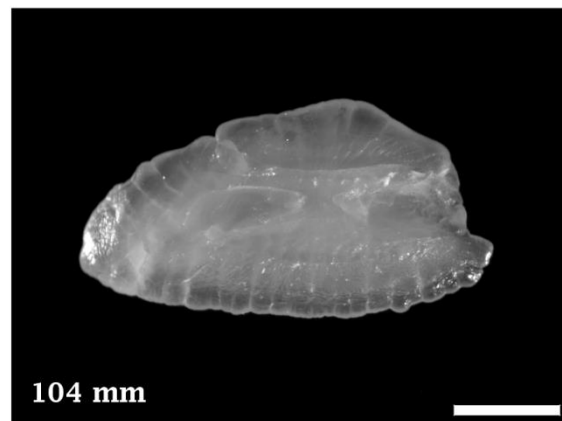
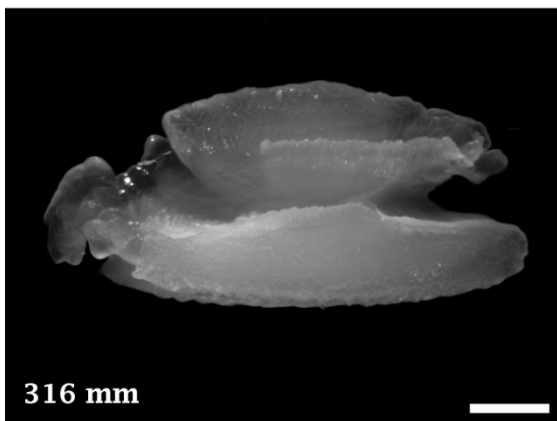
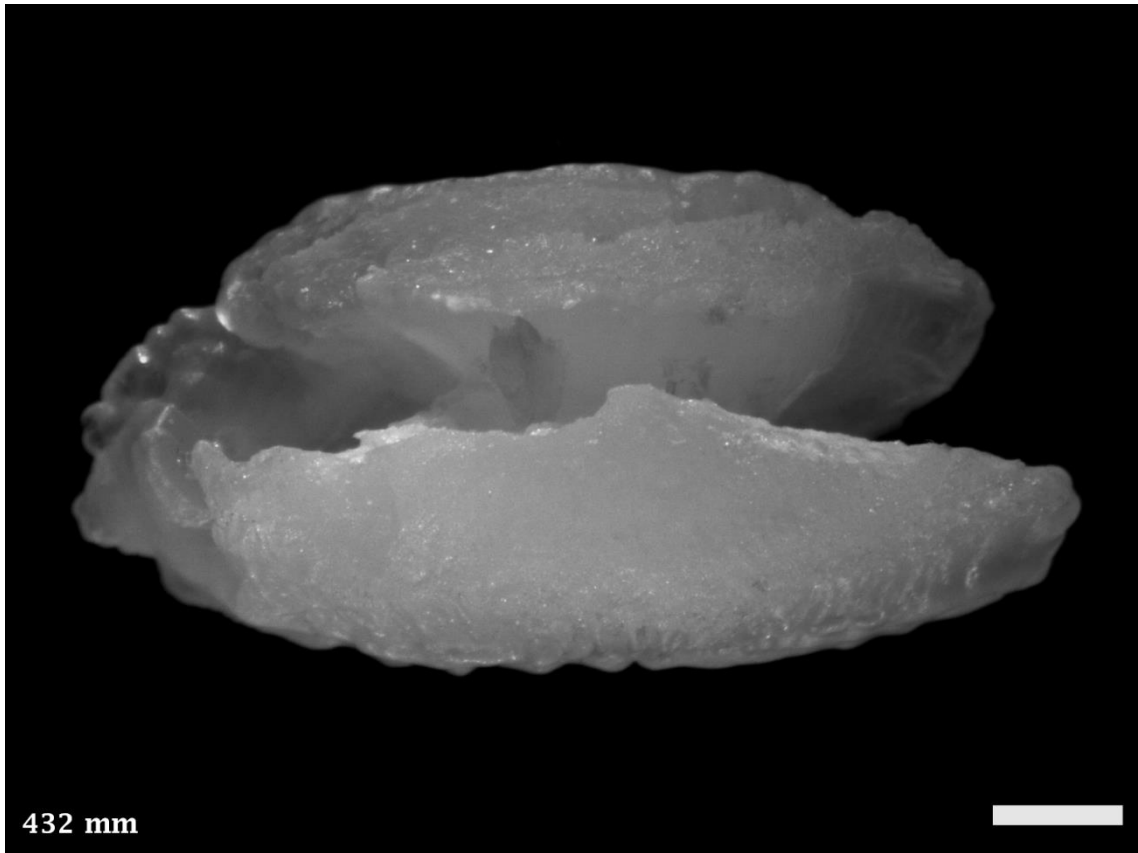


Distribution and Length: Coastal waters from Shark Bay, WA south around to Victor Harbour, SA and Byron Bay, NSW south to Montague Island, NSW. 170 mm TL.



5.185 *Bodianus frenchii*, Foxfish

PERCIFORMES LABRIDAE (Wrasses)

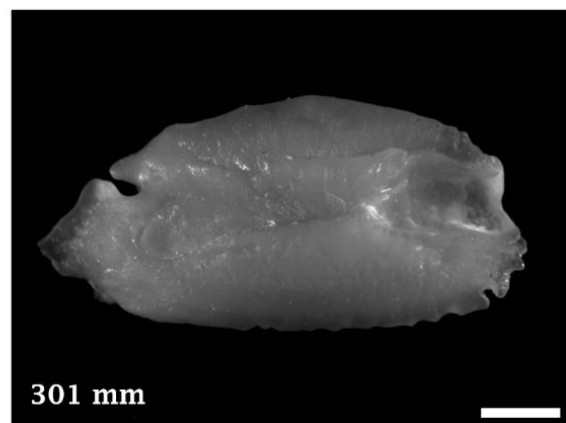
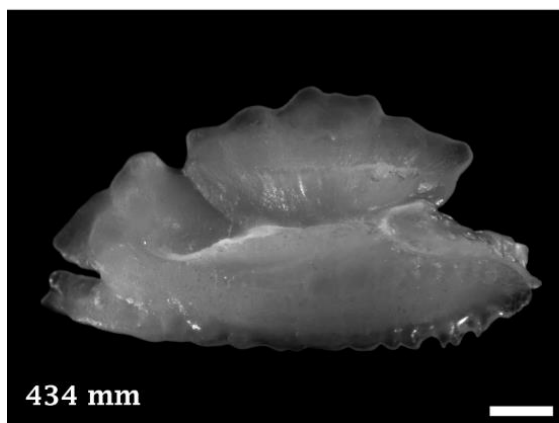
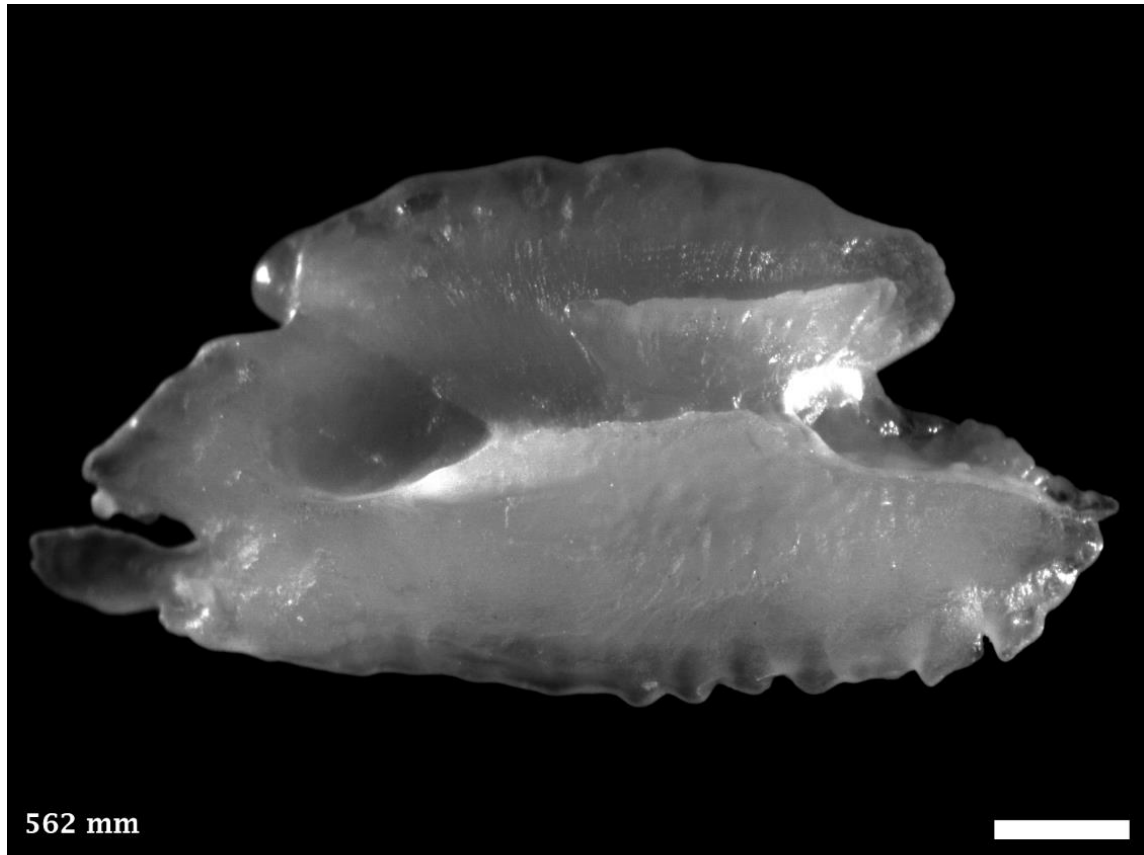


Distribution and Length: Coastal and offshore waters from Onslow, WA south around to eastern South Australia. 490 mm TL.



5.186 *Bodianus vulpinus*, Western Pigfish

PERCIFORMES LABRIDAE (Wrasses)

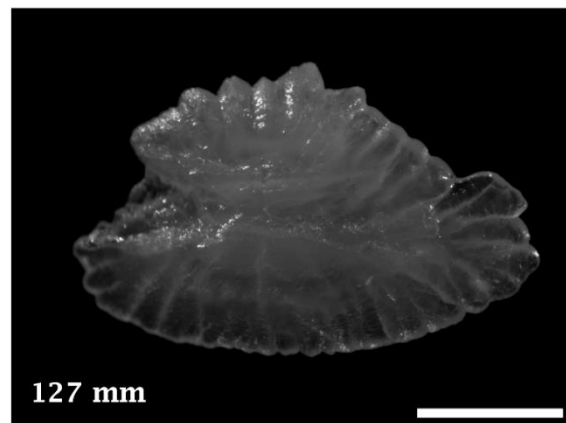
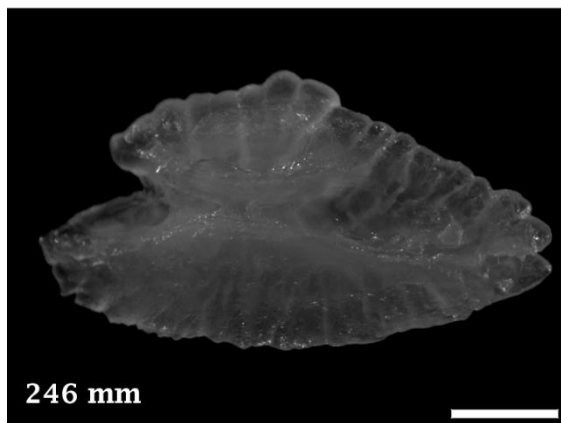
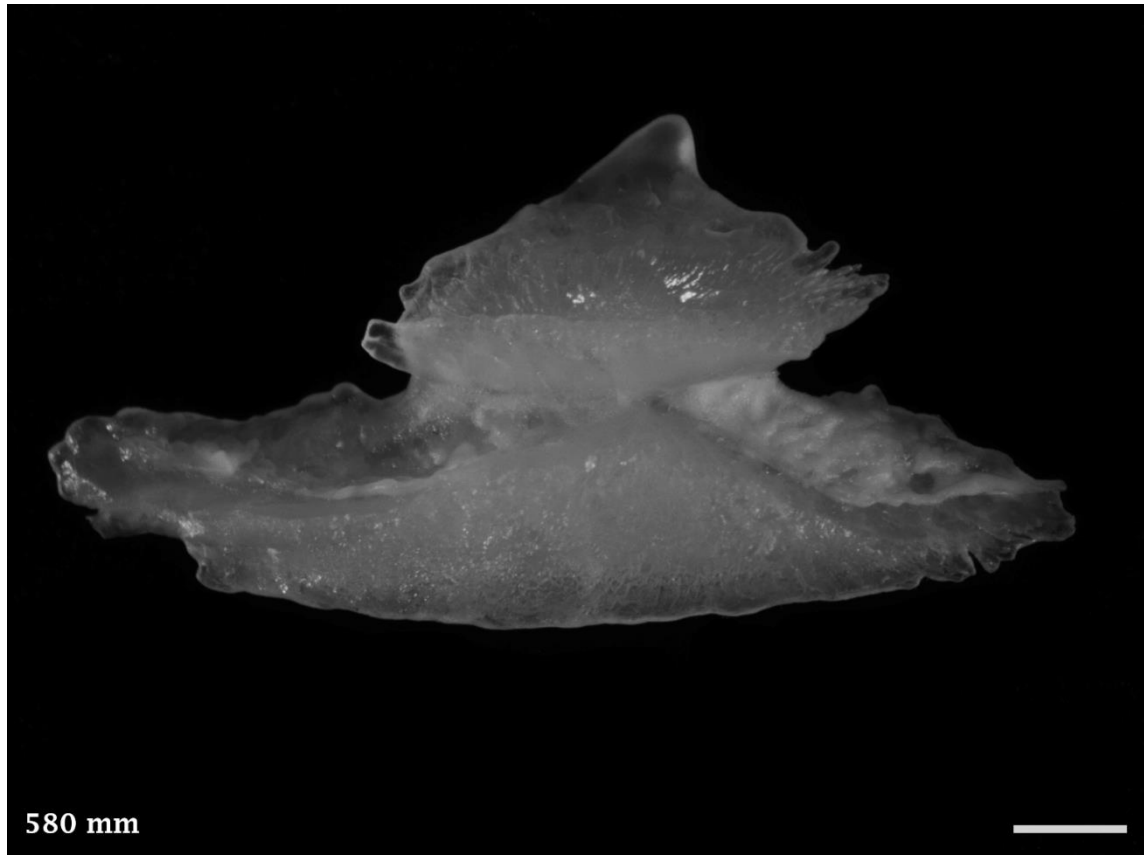


Distribution and Length: Coastal waters from Exmouth Gulf, WA south to the Great Australian Bight. 600 mm TL.



5.187 *Choerodon rubescens*, Baldchin Groper

PERCIFORMES LABRIDAE (Wrasses)

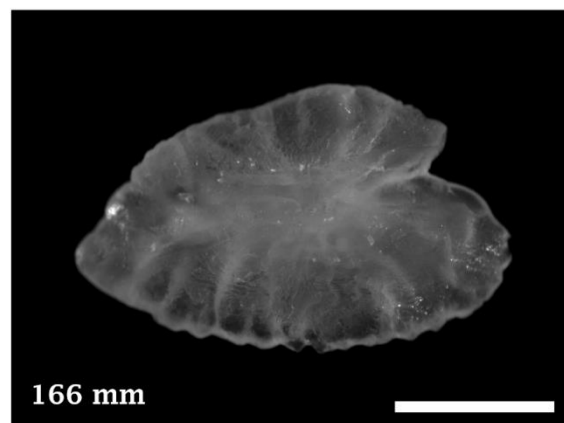
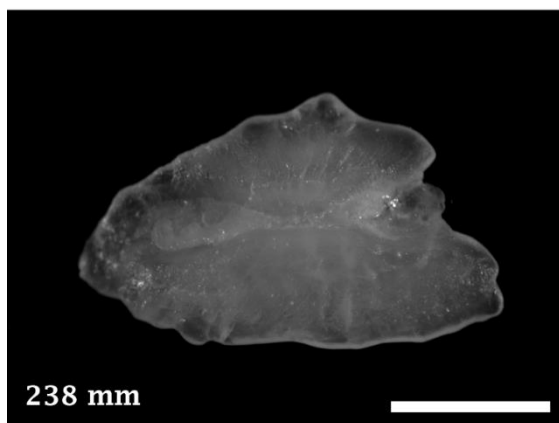
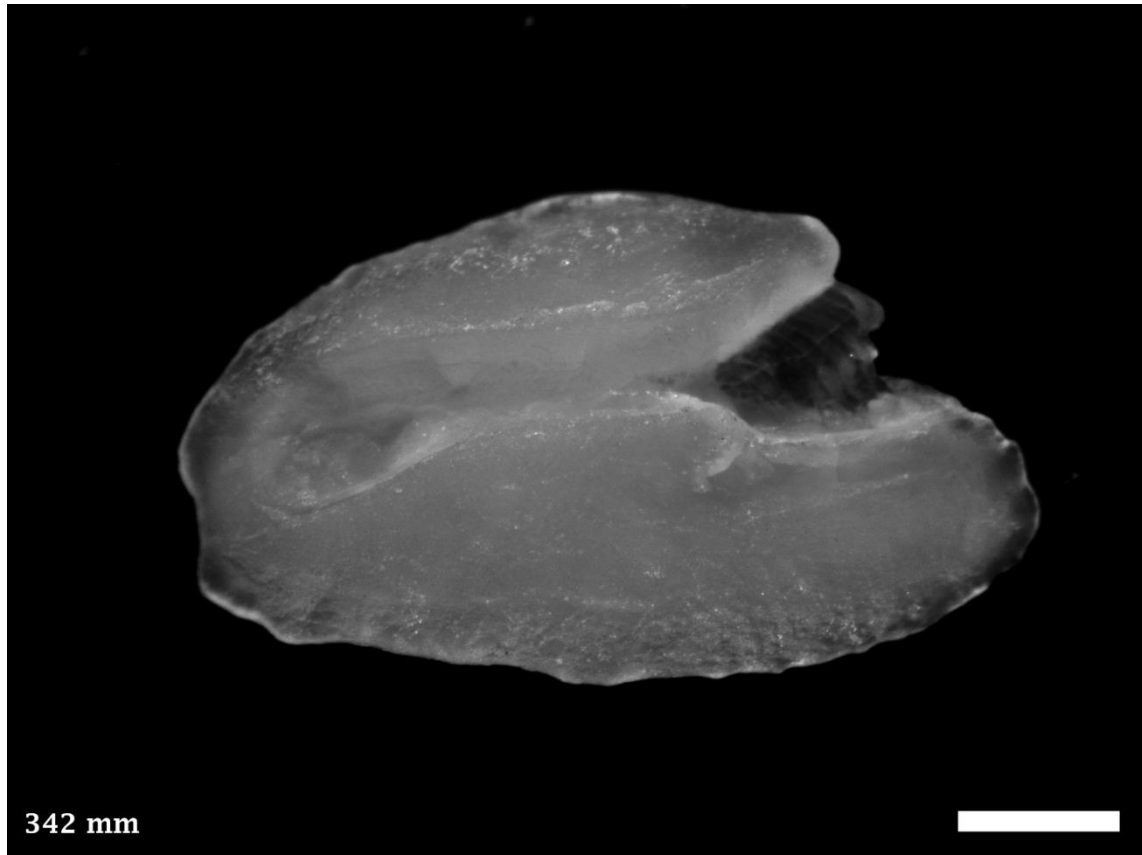


Distribution and Length: Coastal and offshore waters from Coral Bay, WA south to Geographe Bay, WA. Note: Right otoliths. 900 mm TL.



5.188 *Coris auricularis*, Western King Wrasse

PERCIFORMES LABRIDAE (Wrasses)

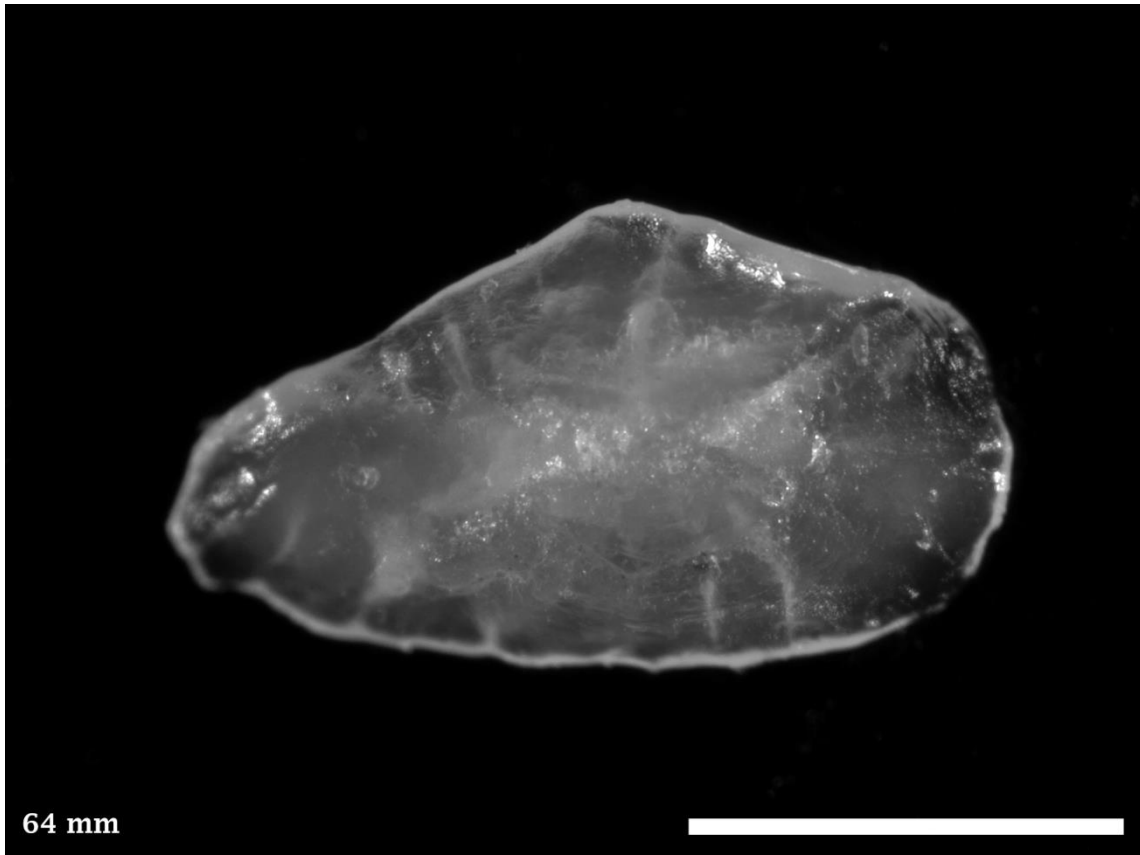


Distribution and Length: Coastal waters from Coral Bay, WA south to Recherche Archipelago, WA. 400 mm TL.



5.189 *Dotalabrus alleni*, Little Rainbow Wrasse

PERCIFORMES LABRIDAE (Wrasses)

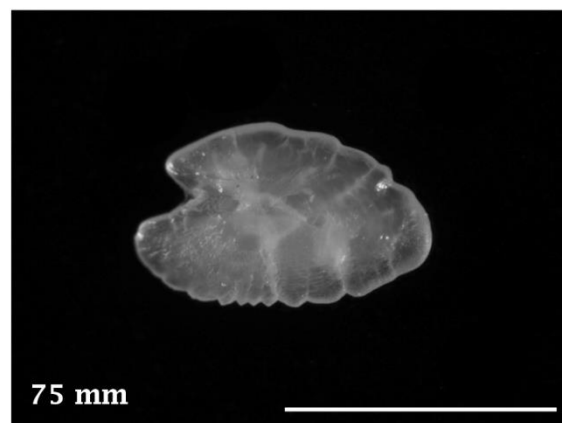
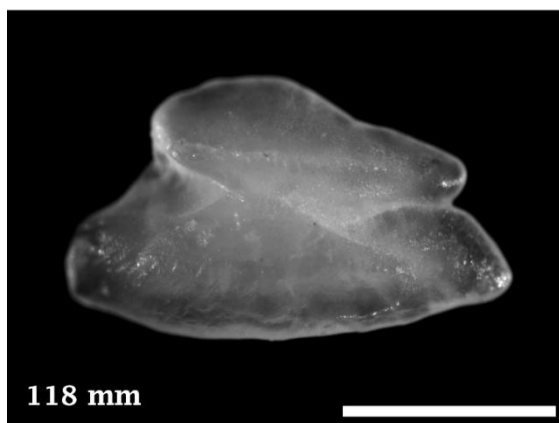
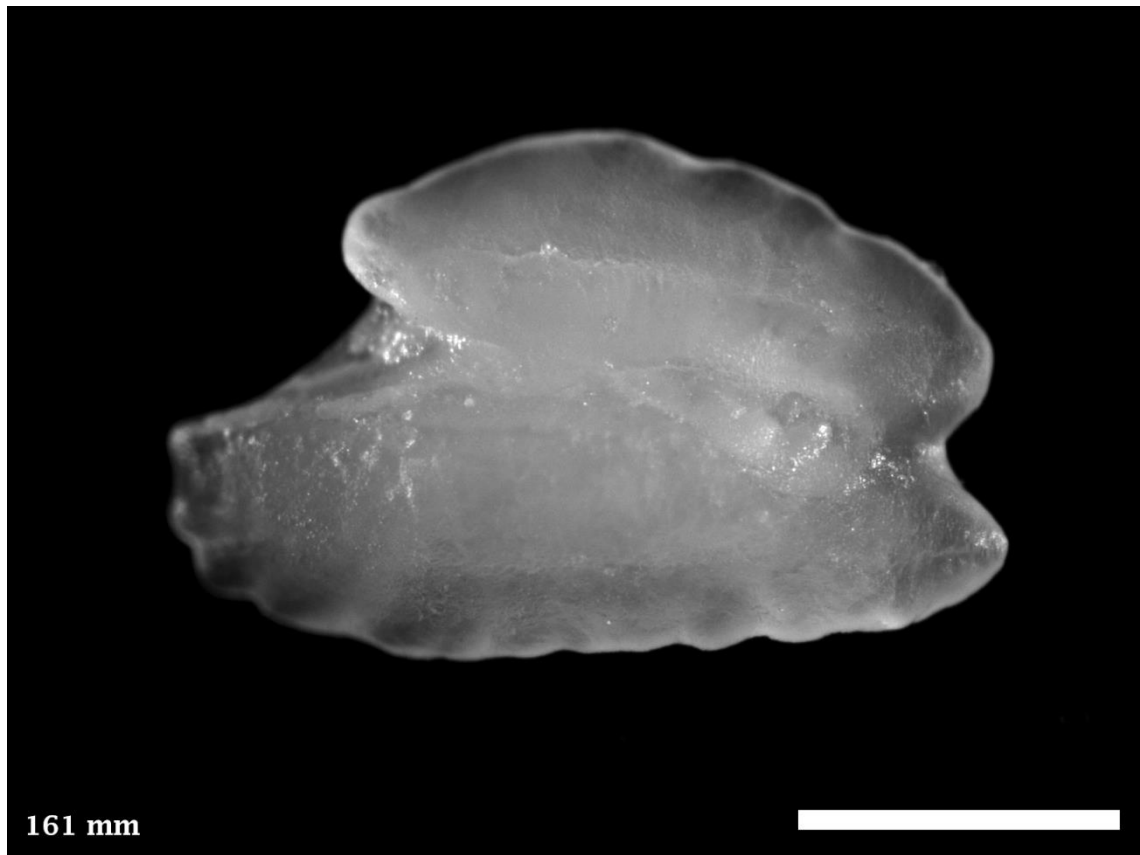


Distribution and Length: Coastal waters from Jurien Bay, WA south to Recherche Archipelago, WA. 100 mm TL.



5.190 *Halichoeres brownfieldi*, Brownfield's Wrasse

PERCIFORMES LABRIDAE (Wrasses)

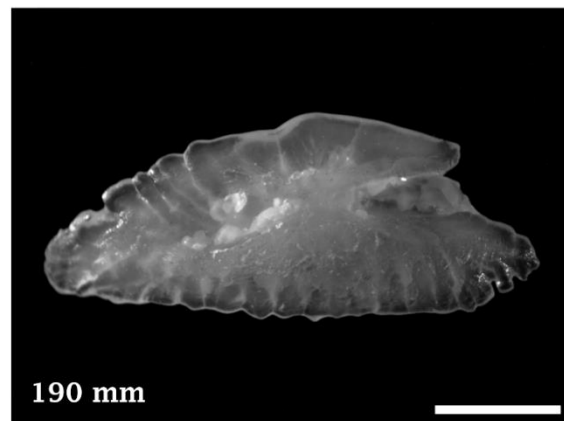
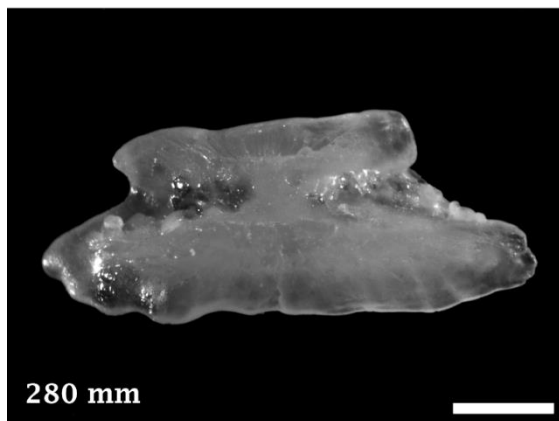
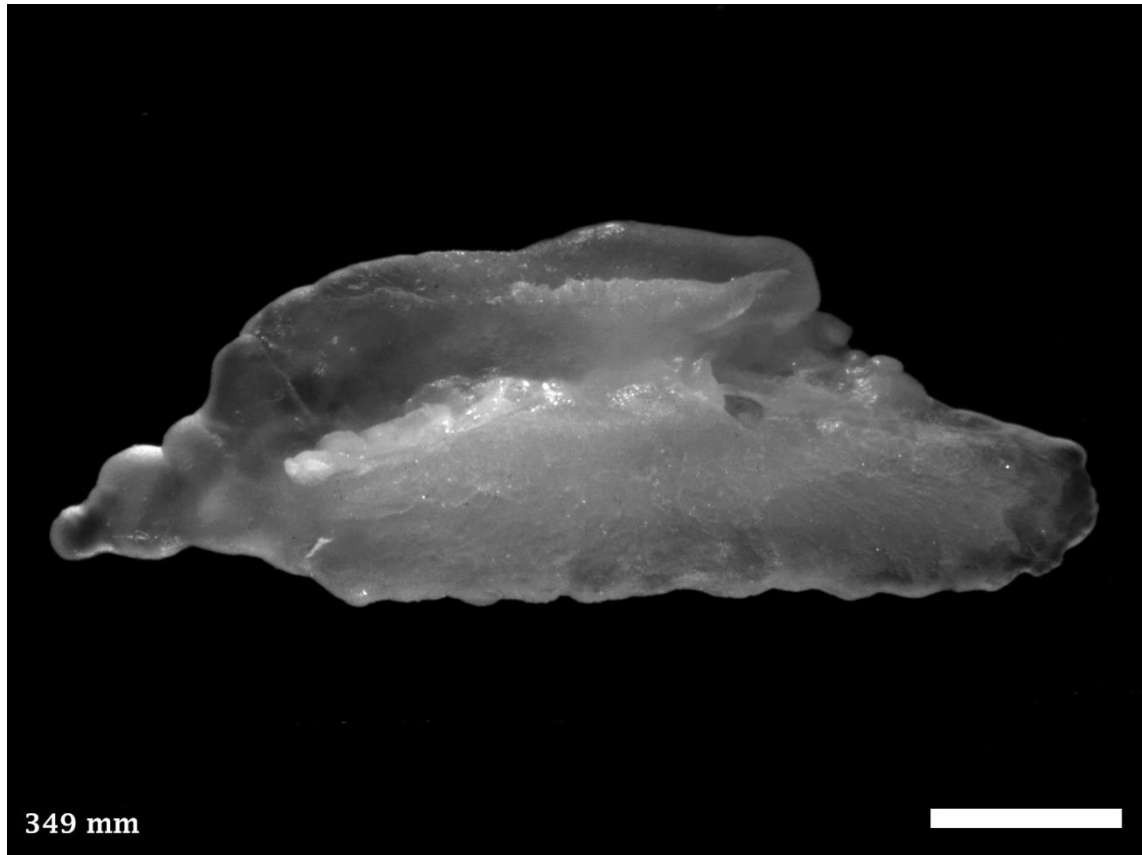


Distribution and Length: Coastal waters from Coral Bay, WA south to Recherche Archipelago, WA. Note: Right otoliths. 160 mm TL.



5.191 *Notolabrus parilus*, Brownspotted Wrasse

PERCIFORMES LABRIDAE (Wrasses)

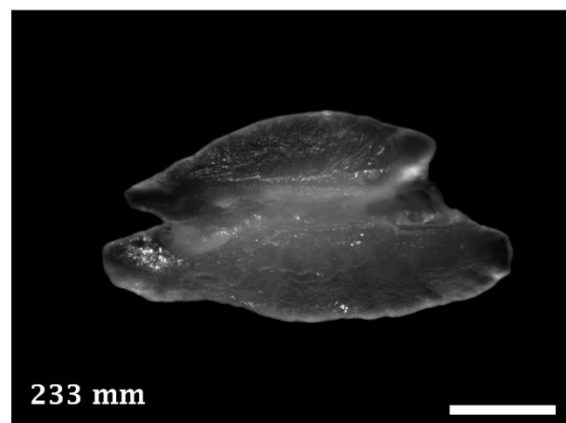
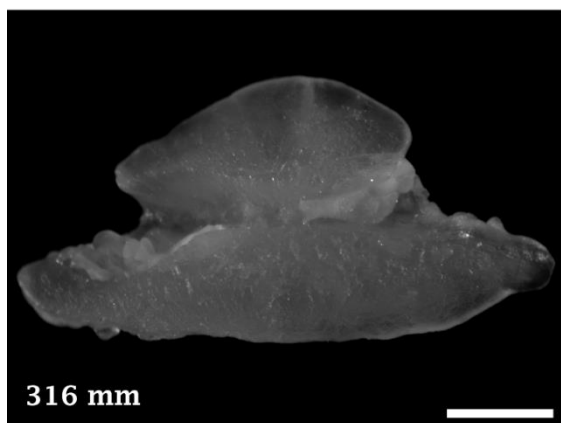
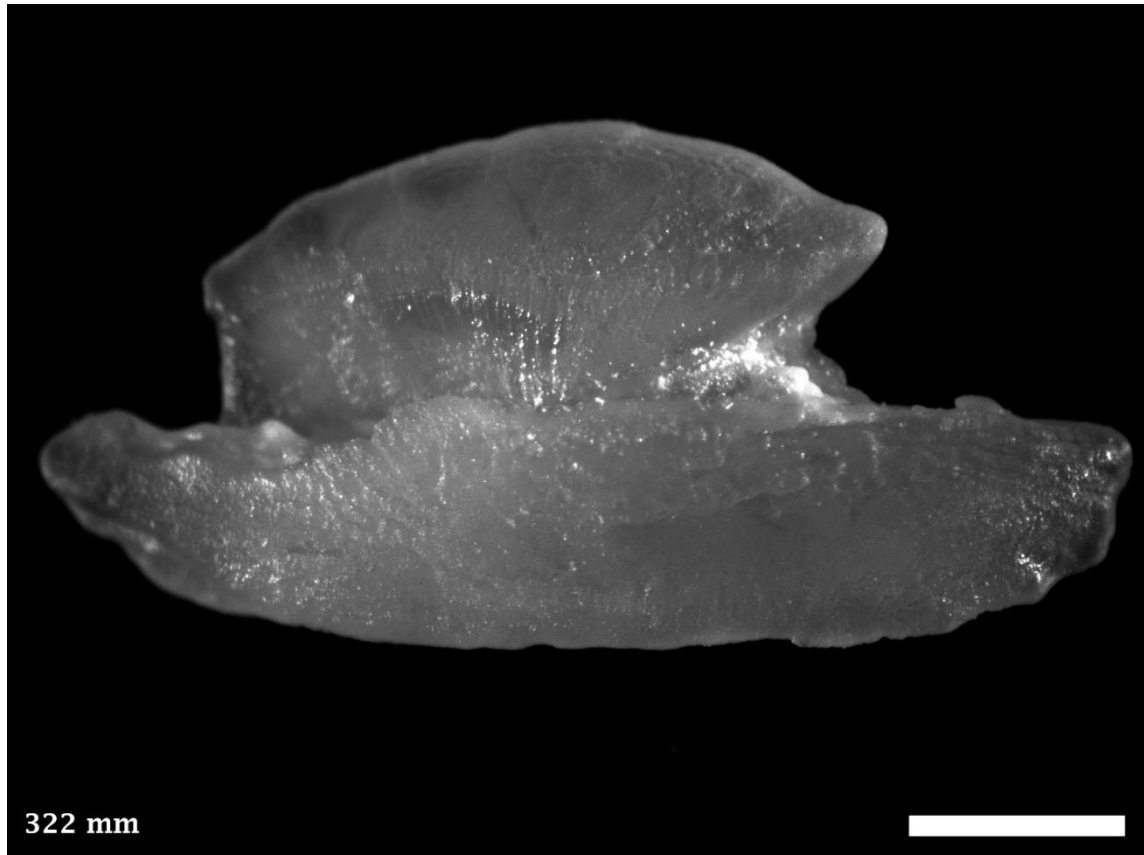


Distribution and Length: Coastal waters from Shark Bay, WA south around to Port Phillip Bay, Victoria. 490 mm TL.



5.192 *Ophthalmolepis lineolatus*, Southern Maori Wrasse

PERCIFORMES LABRIDAE (Wrasses)

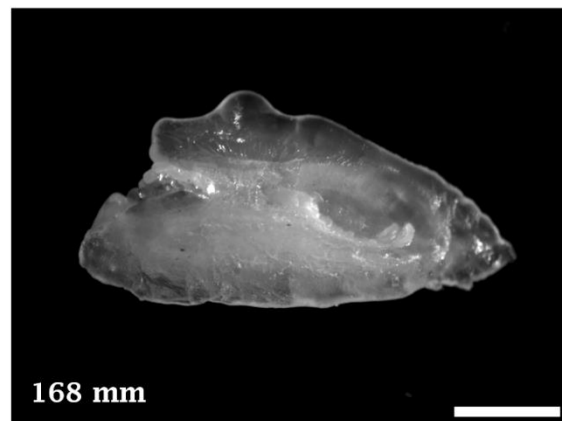
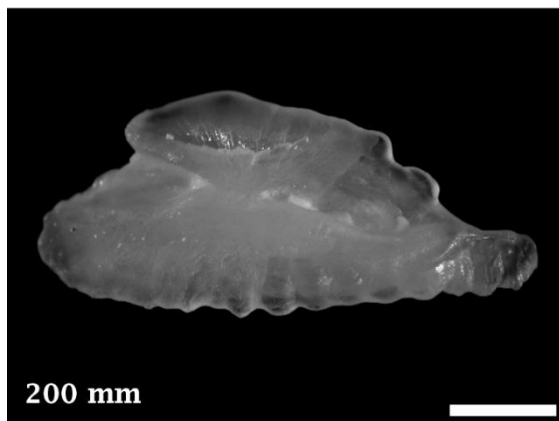
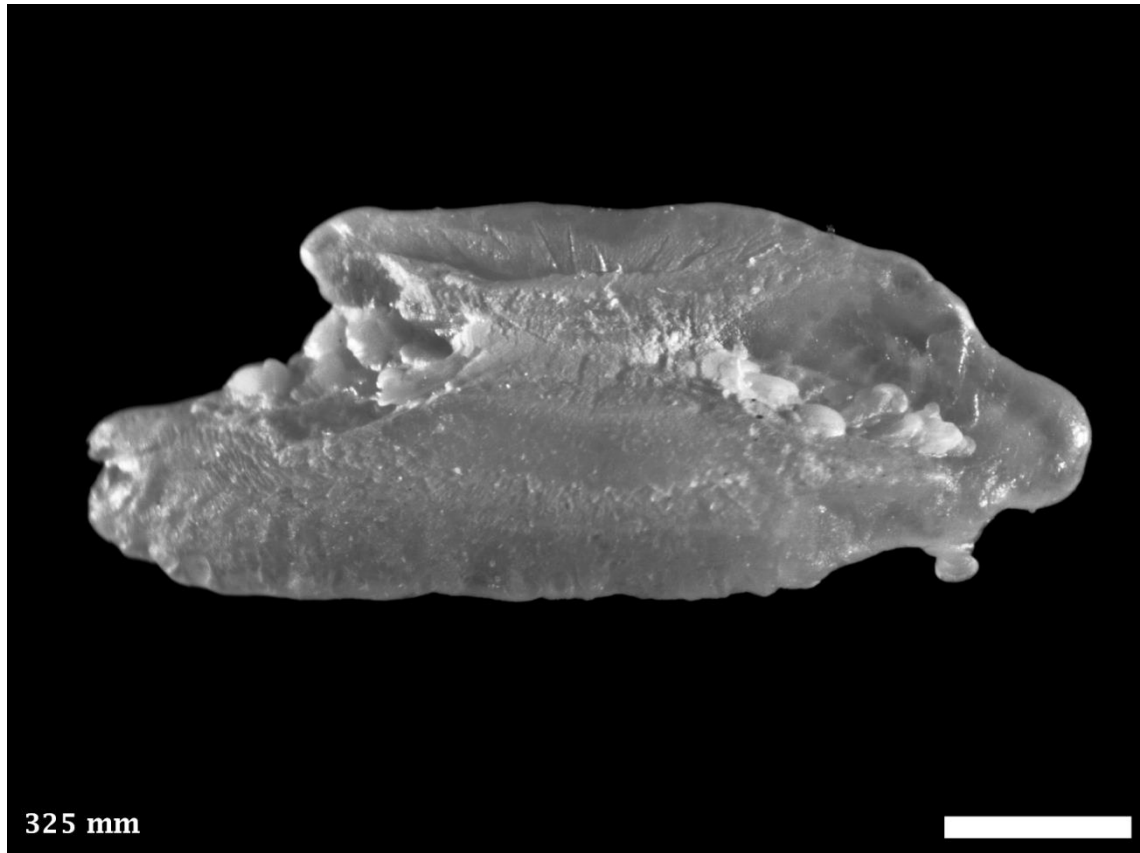


Distribution and Length: Coastal reefs from Houtman Abrolhos, WA south around to Byron Bay, NSW. 410 mm TL



5.193 *Pictilabrus laticlavius*, Senator Wrasse

PERCIFORMES LABRIDAE (Wrasses)

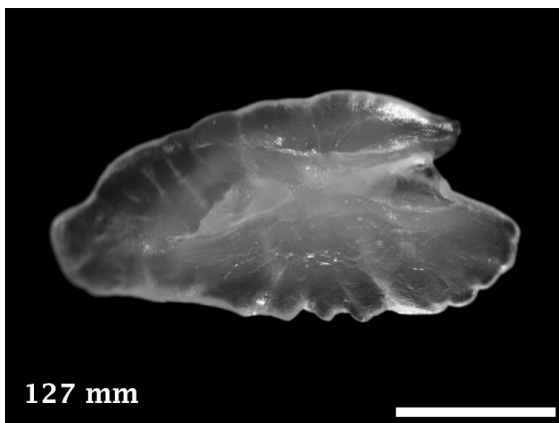
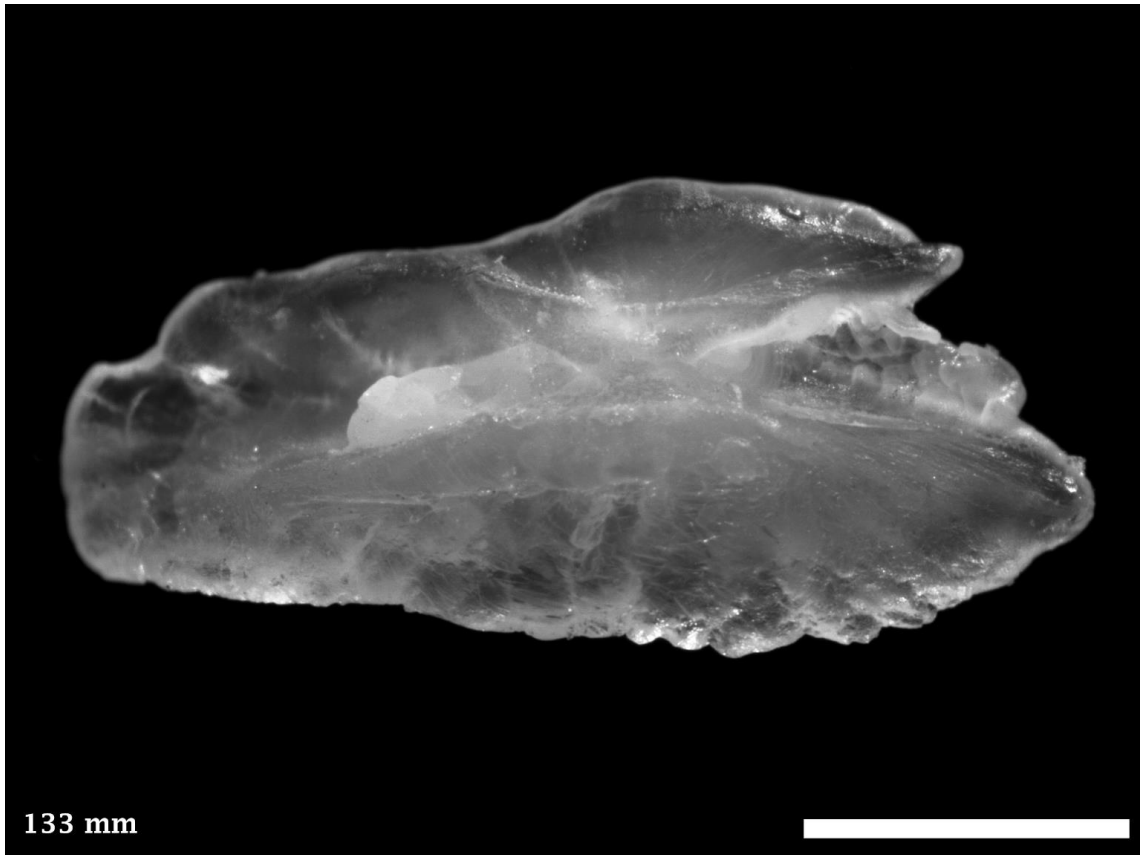


Distribution and Length: Coastal reefs from Houtman Abrolhos, WA south around to Byron Bay, NSW, including Tasmania. Note: Right otoliths. 330 mm TL.



5.194 *Pictilabrus viridis*, False Senator Wrasse

PERCIFORMES LABRIDAE (Wrasses)

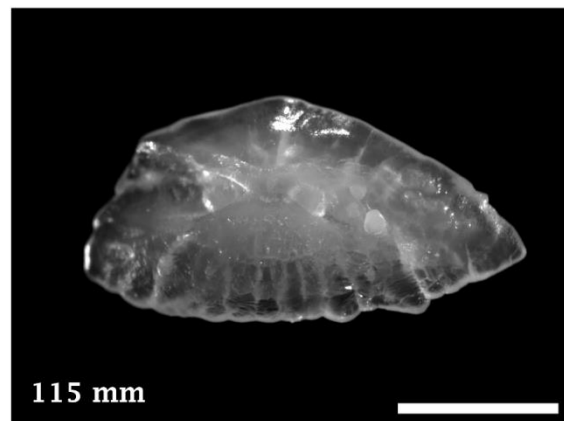
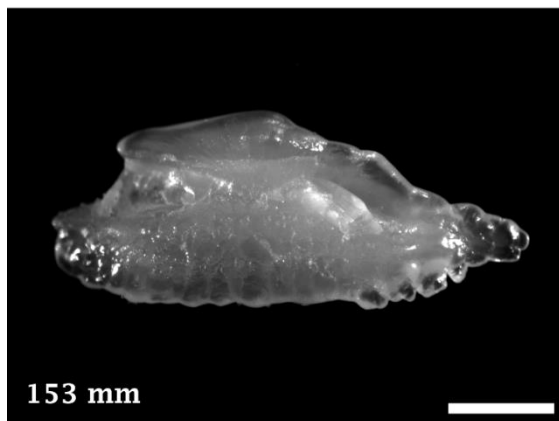
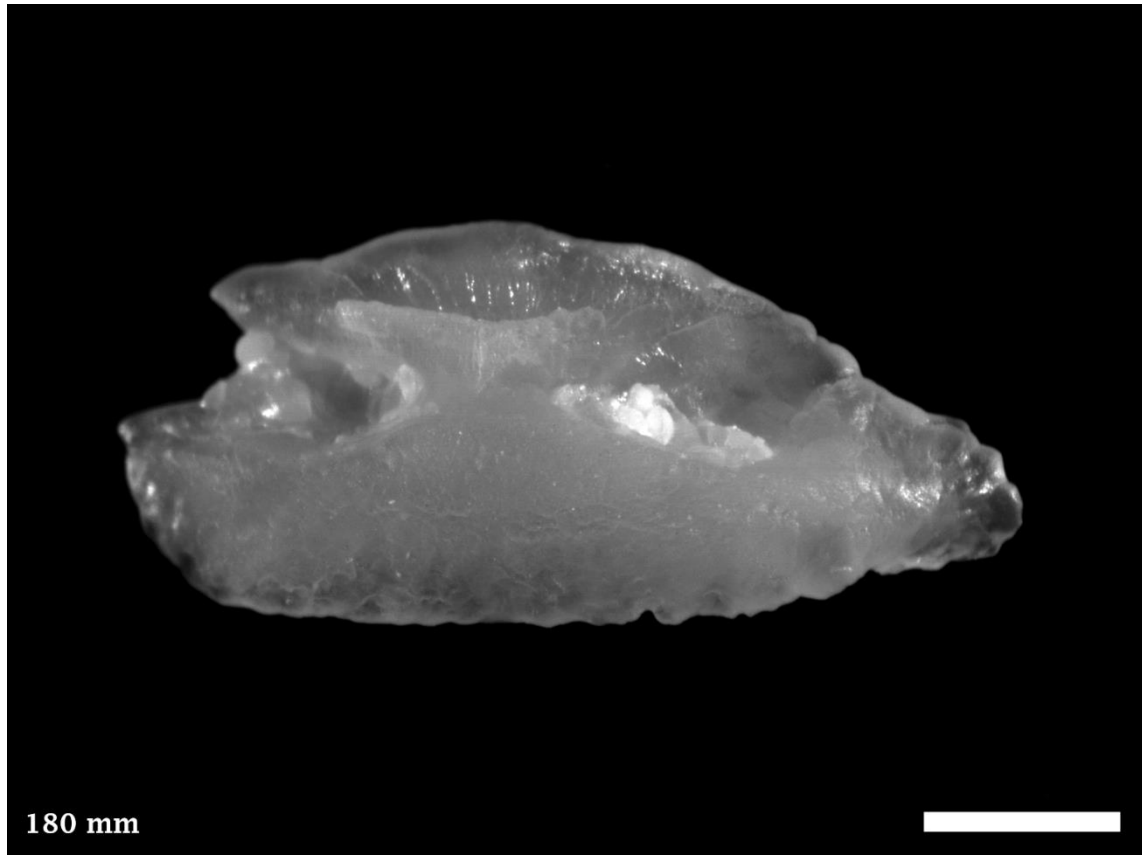


Distribution and Length: Coastal reefs from Jurien Bay, WA south around to Recherche Archipelago, WA. 200 mm TL.



5.195 *Pseudolabrus biserialis*, Redband Wrasse

PERCIFORMES LABRIDAE (Wrasses)

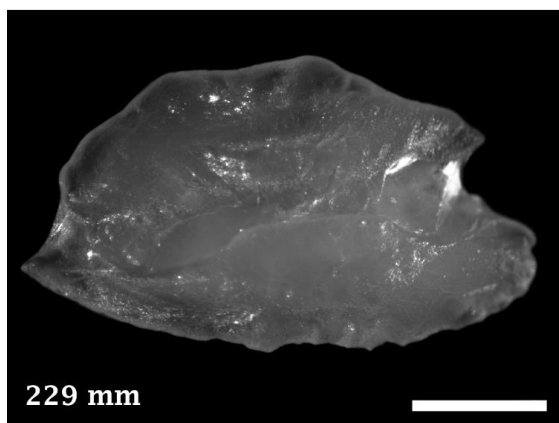
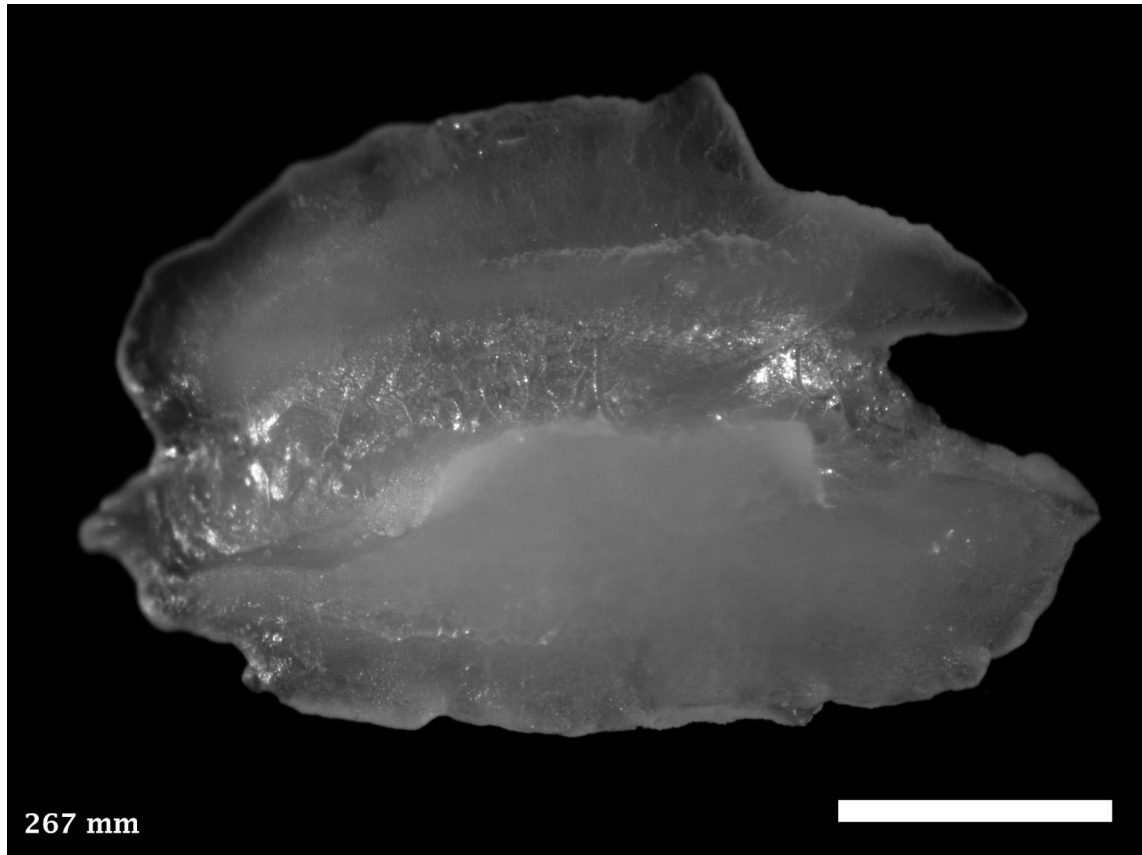


Distribution and Length: Coastal reefs from Houtman Abrolhos, WA south around to Recherche Archipelago, WA. Note: Right otoliths. 250 mm TL.



5.196 *Thalassoma lutescens*, Green Moon Wrasse

PERCIFORMES LABRIDAE (Wrasses)

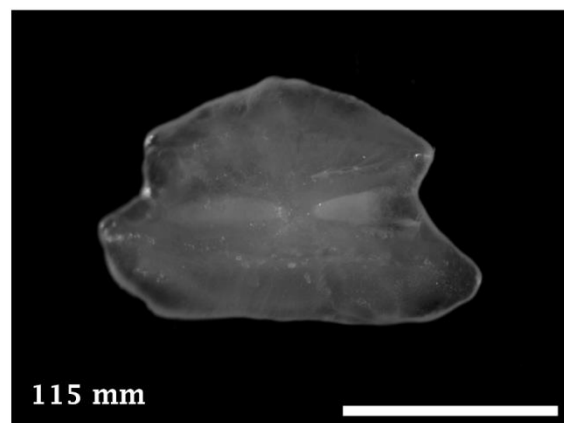
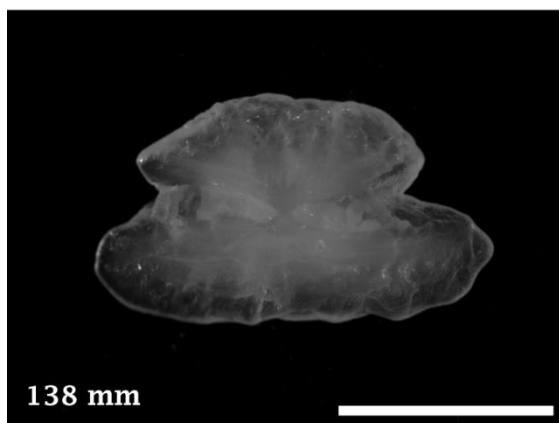
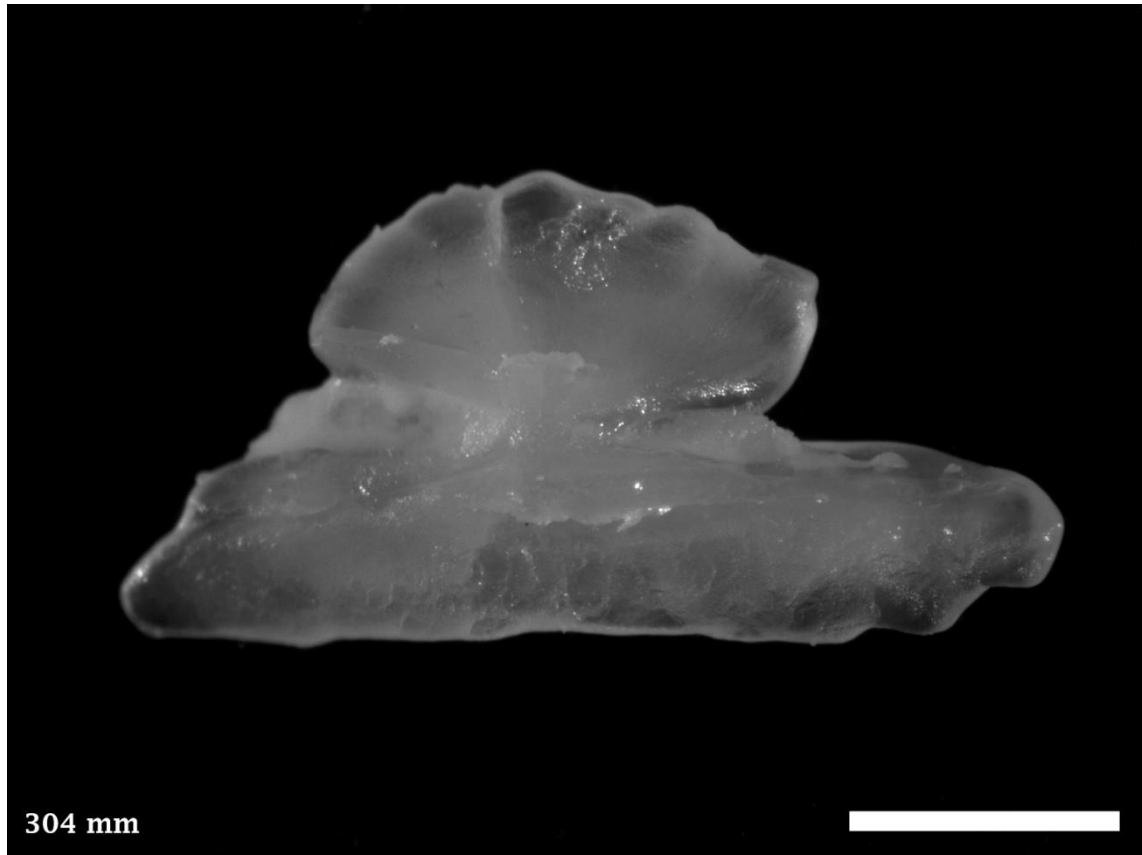


Distribution and Length: Estuaries and coastal waters from Rottnest Island, WA north around to Montague Island, NSW. 300 mm TL.



5.197 *Haletta semifasciata*, Blue Weed Whiting

PERCIFORMES ODACIDAE (Rock Whittings)

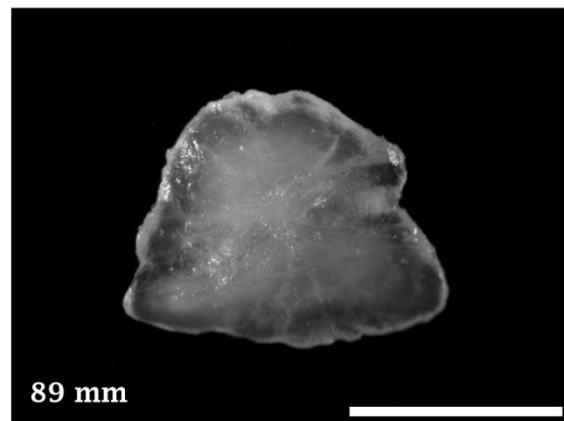
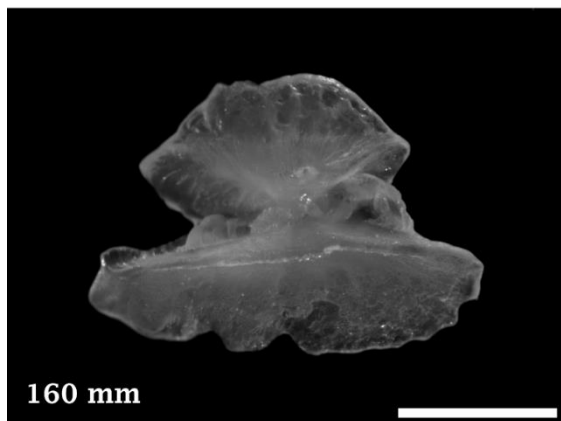
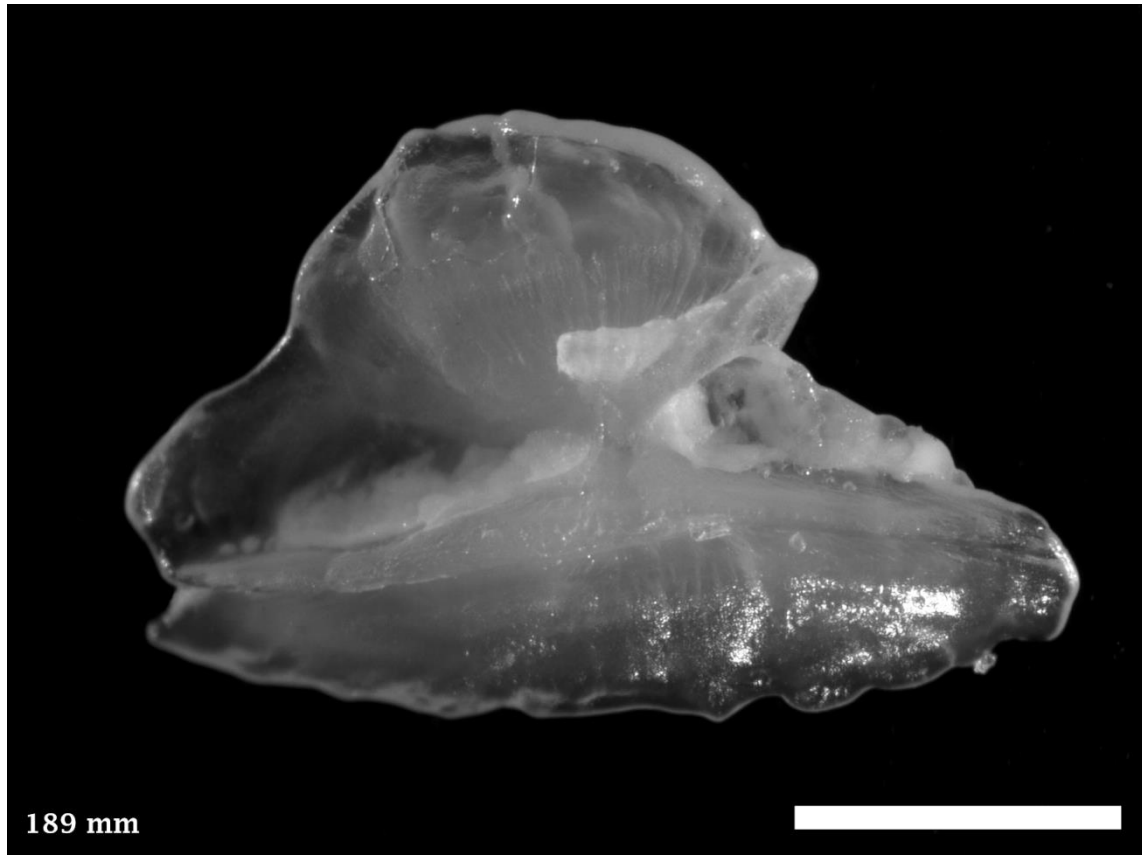


Distribution and Length: Estuaries and coastal waters from Fremantle, WA south around to Sydney, NSW, including Tasmania. 410 mm TL.



5.198 *Heteroscarus acroptilus*, Rainbow Cale

PERCIFORMES ODACIDAE (Rock Whittings)

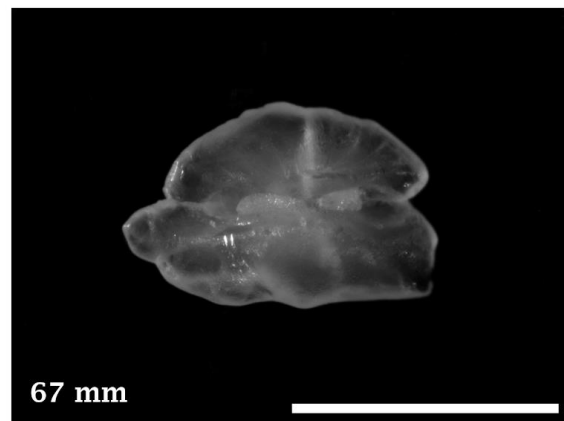
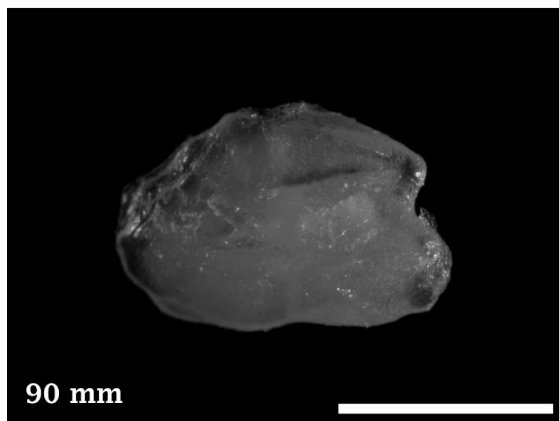
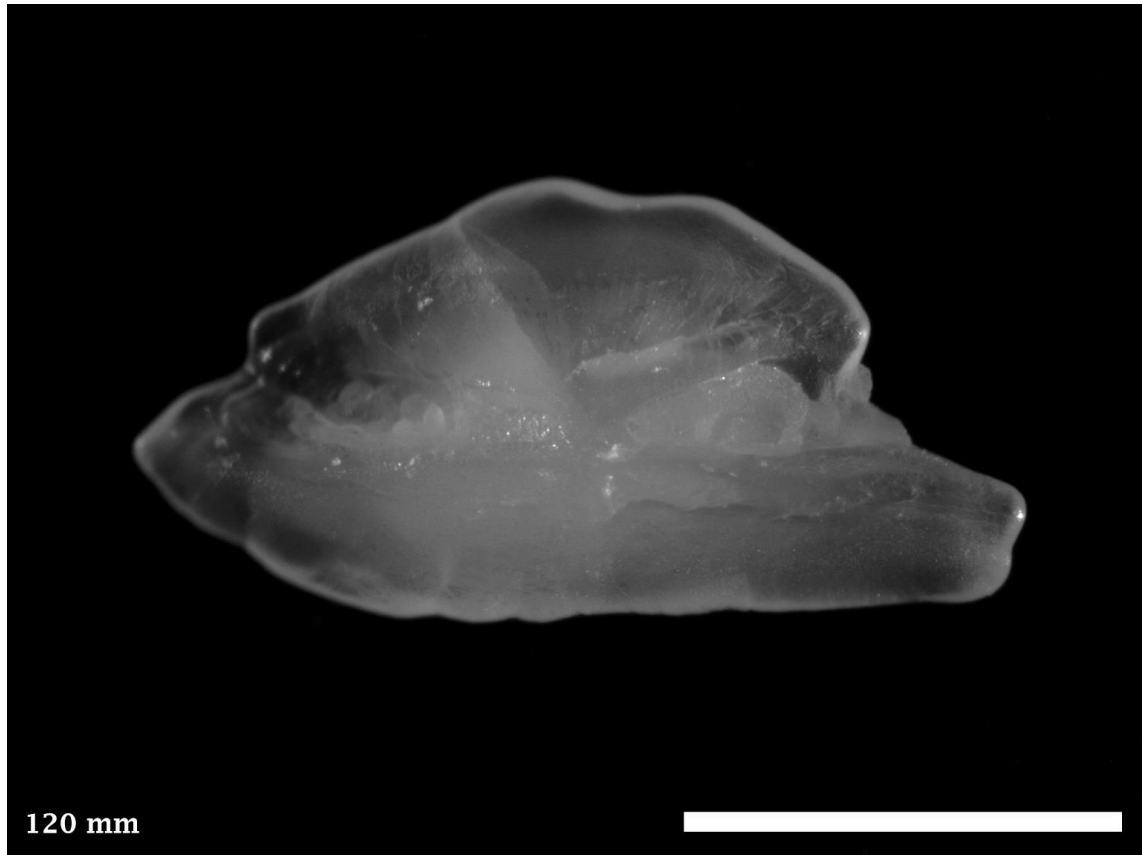


Distribution and Length: Coastal waters from Kalbarri, WA south around to Newcastle, NSW, including Tasmania. 300 mm TL



5.199 *Neoodax balteatus*, Little Weed Whiting

PERCIFORMES ODACIDAE (Rock Whittings)

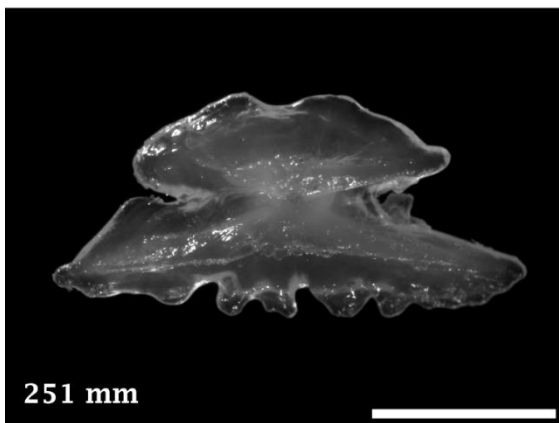
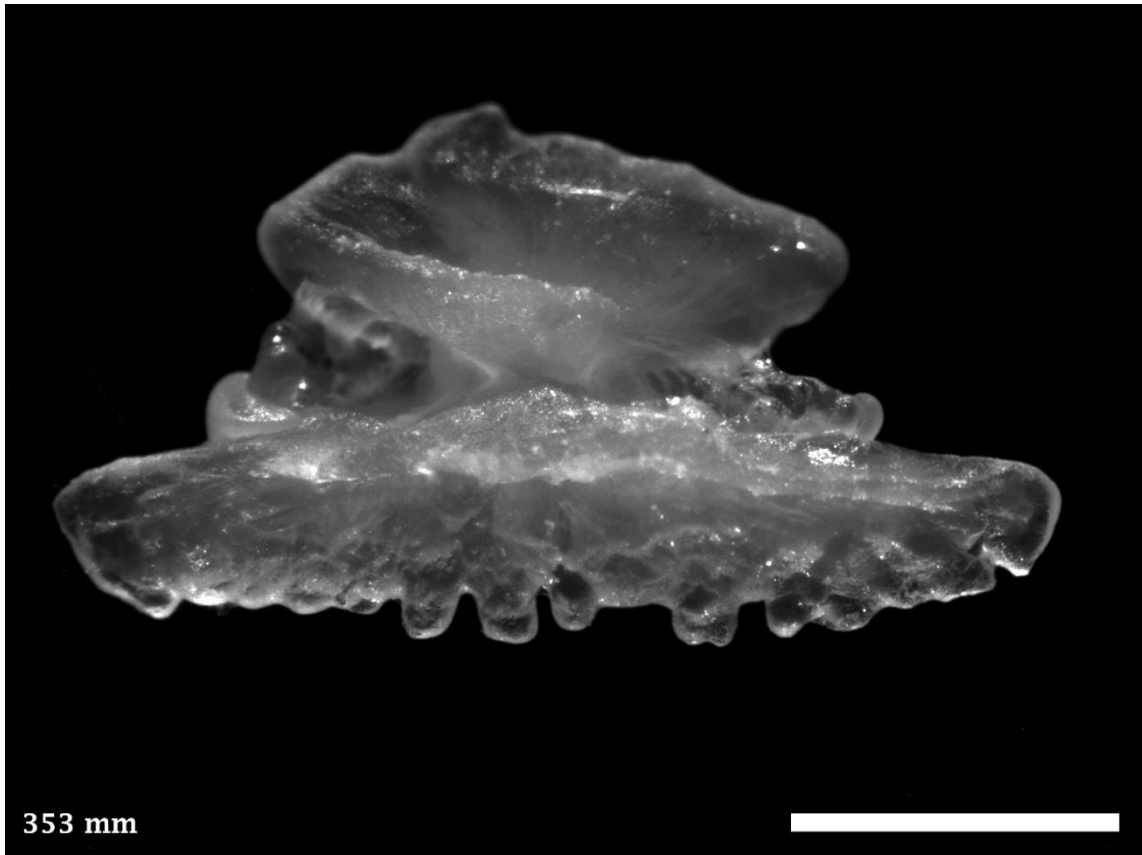


Distribution and Length: Coastal waters from Fremantle, WA south around to Sydney, NSW, including Tasmania. 160 mm TL.



5.200 *Olisthops cyanomelas*, Herring Cale

PERCIFORMES ODACIDAE (Rock Whittings)

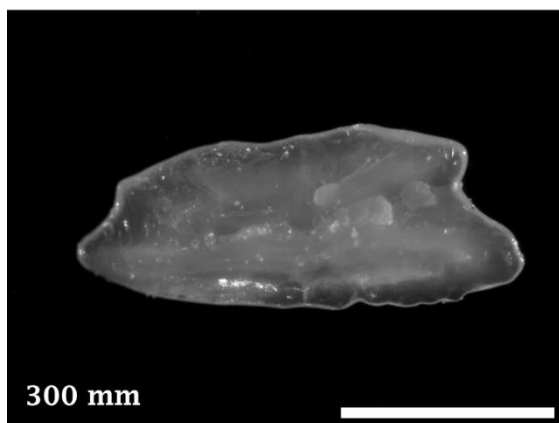
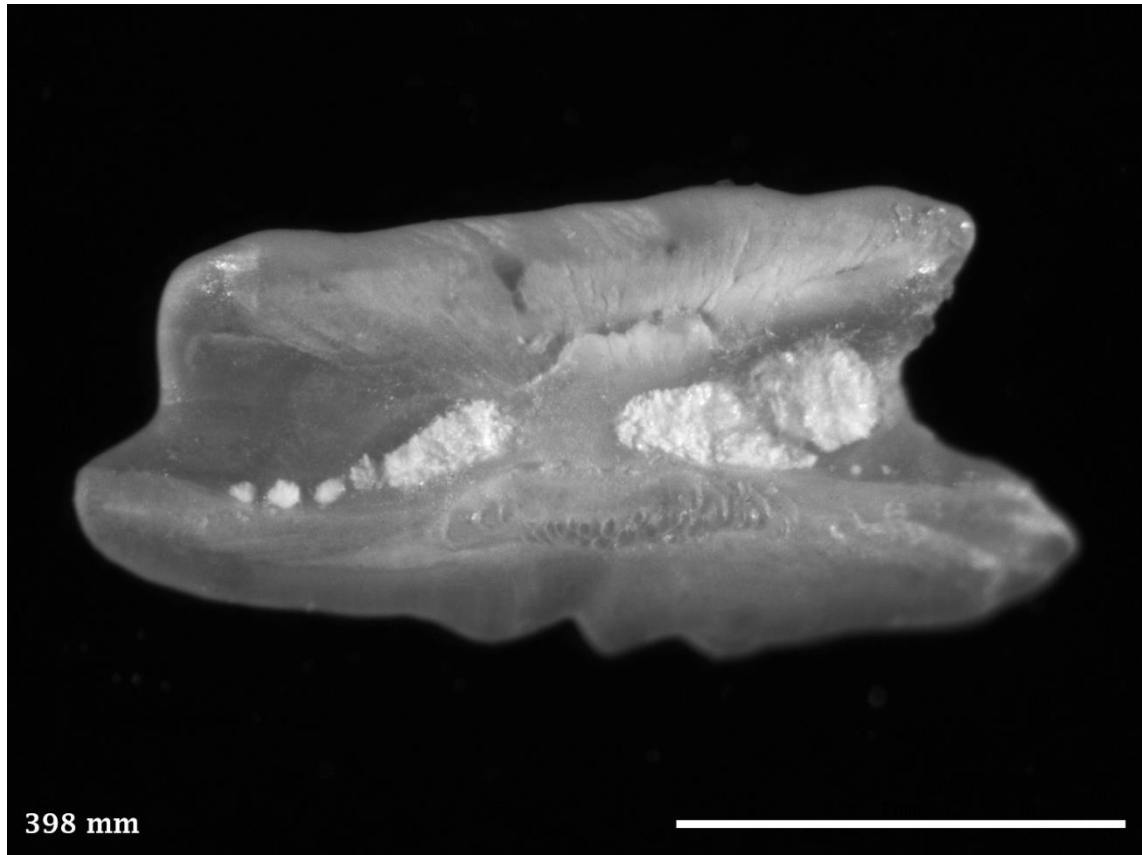


Distribution and Length: Coastal waters from Kalbarri, WA south around to Coffs Harbour, NSW, including Tasmania. 510 mm TL.



5.201 *Siphonognathus argyrophanes*, Tubemouth

PERCIFORMES ODACIDAE (Rock Whitings)

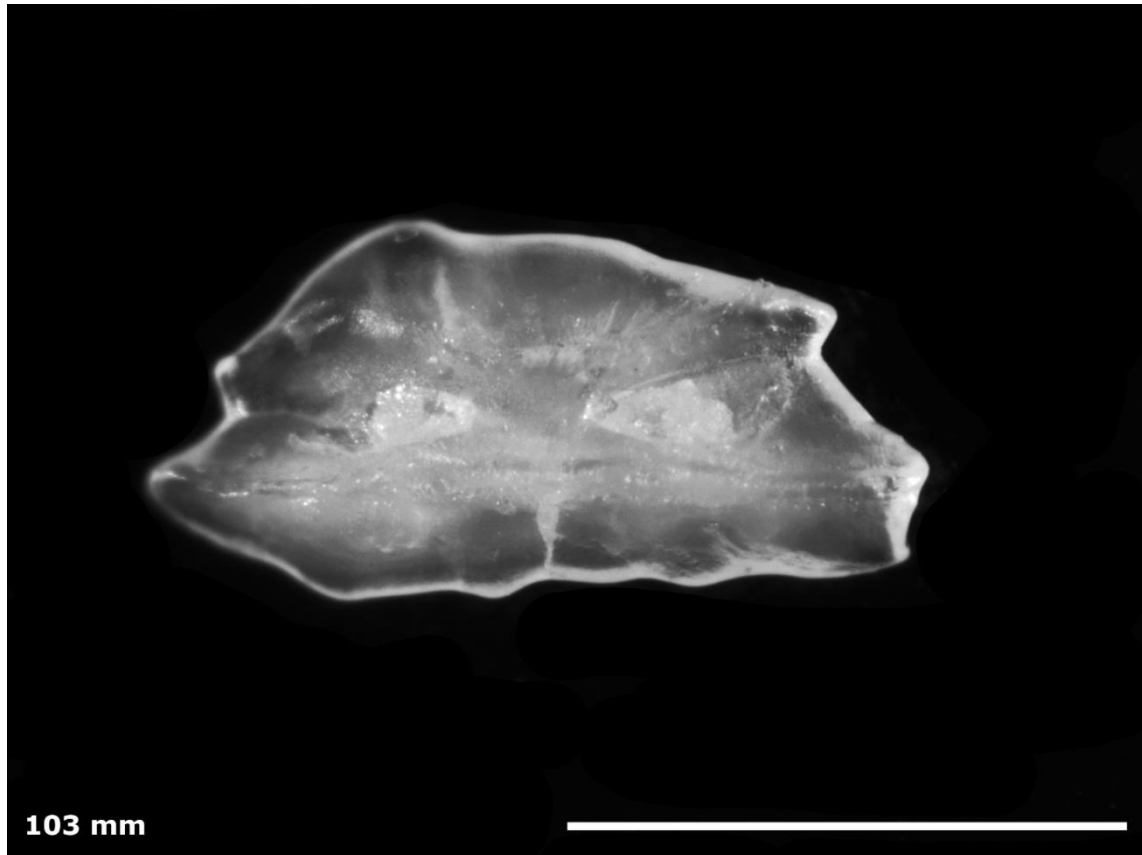


Distribution and Length: Protected seagrass and algae beds from Lancelin, WA south around to Wilson's Promontory, Victoria, including Tasmania. 520 mm TL.



5.202 *Siphonognathus beddomei*, Pencil Weed Whiting

PERCIFORMES ODACIDAE (Rock Whittings)

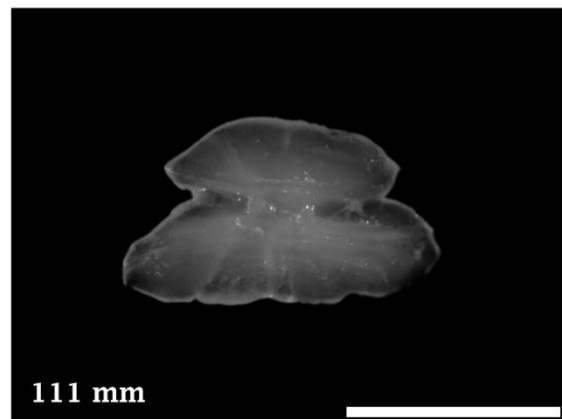
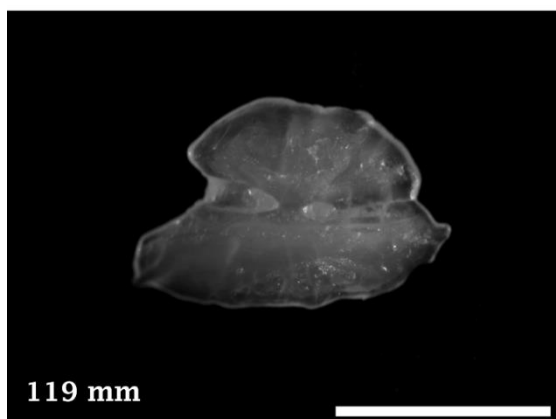
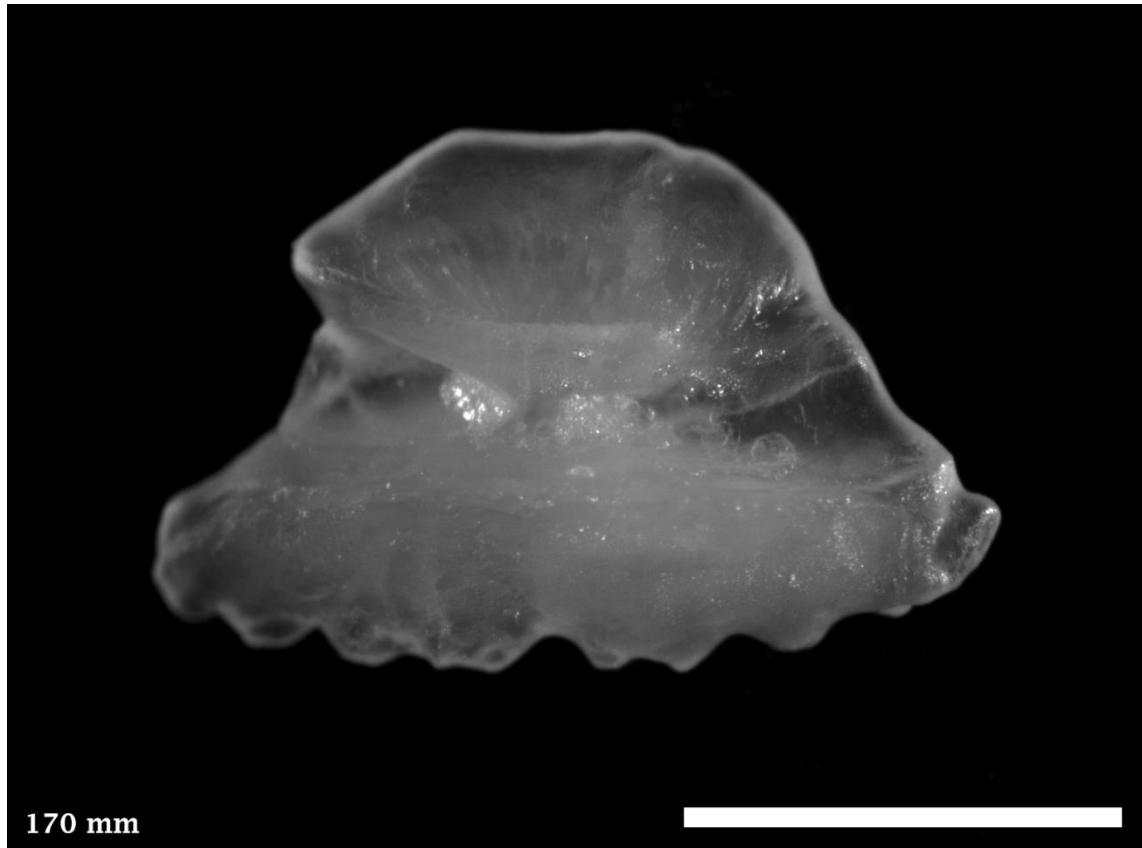


Distribution and Length: Coastal reefs and weed areas from Dongara, WA south around to Wilson's Promontory, Victoria, including Tasmania. 160 mm TL.



5.203 *Siphonognathus radiatus*, Longray Weed Whiting

PERCIFORMES ODACIDAE (Rock Whittings)

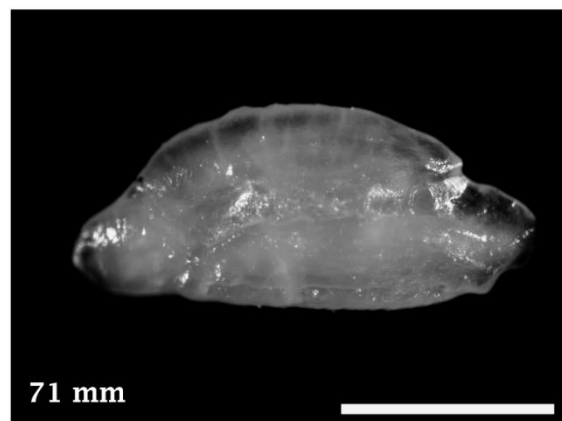
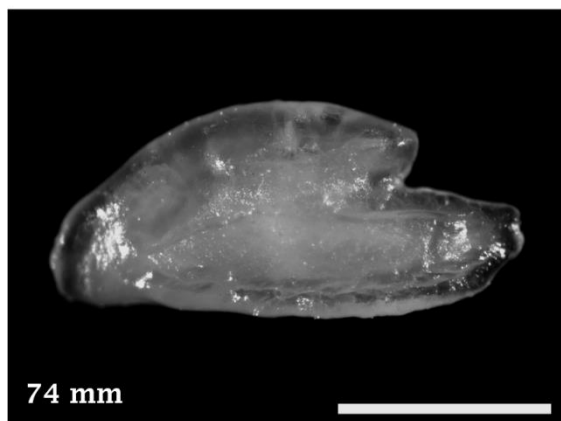
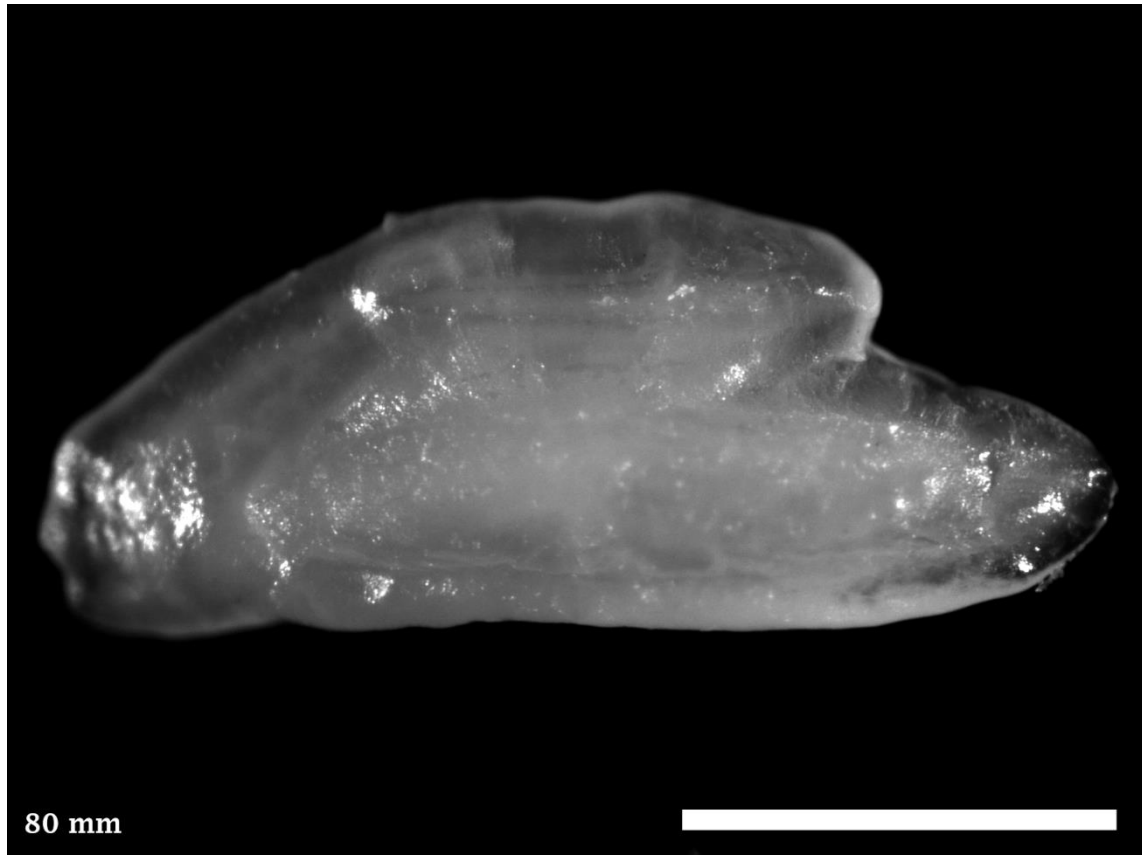


Distribution and Length: Coastal waters from Jurien Bay, WA south around to Wilson's Promontory, Victoria, including Tasmania. 250 mm TL.



5.204 *Parapercis haackei*, Wavy Grubfish

PERCIFORMES PINGUIPEDIDAE (Grubfishes)

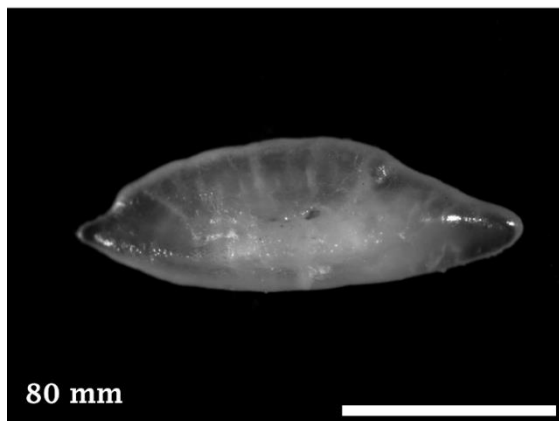


Distribution and Length: Coastal waters from Point Quobba, WA south around to Kangaroo Island SA. 110 mm TL.



5.205 *Lesueurina platycephala*, Flathead Sandfish

PERCIFORMES LETOSCOPIDAE (Sandfishes)

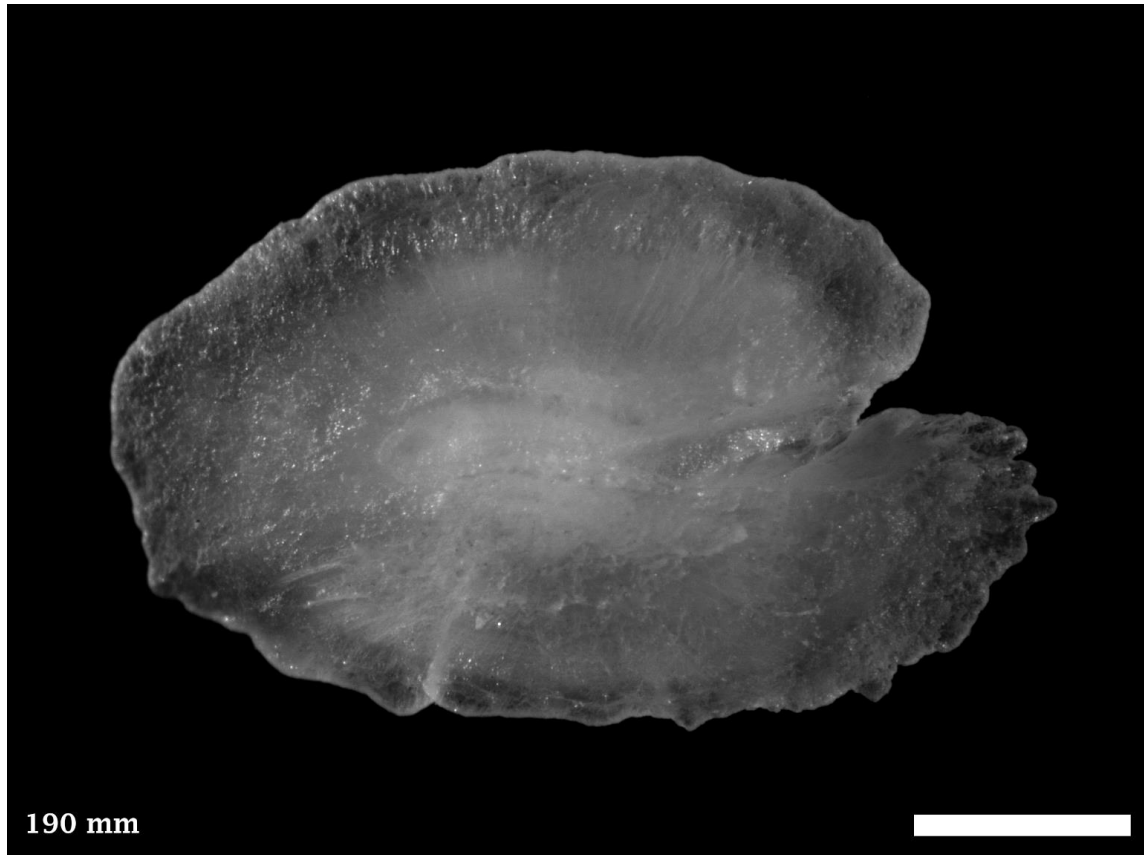


Distribution and Length: Coastal waters from Point Quobba, WA south around to Southern Queensland, including Tasmania. 110 mm TL.



5.206 *Kathetostoma nigrofasciatum*, Deepwater Stargazer

PERCIFORMES URANOSCOPIDAE (Stargazers)

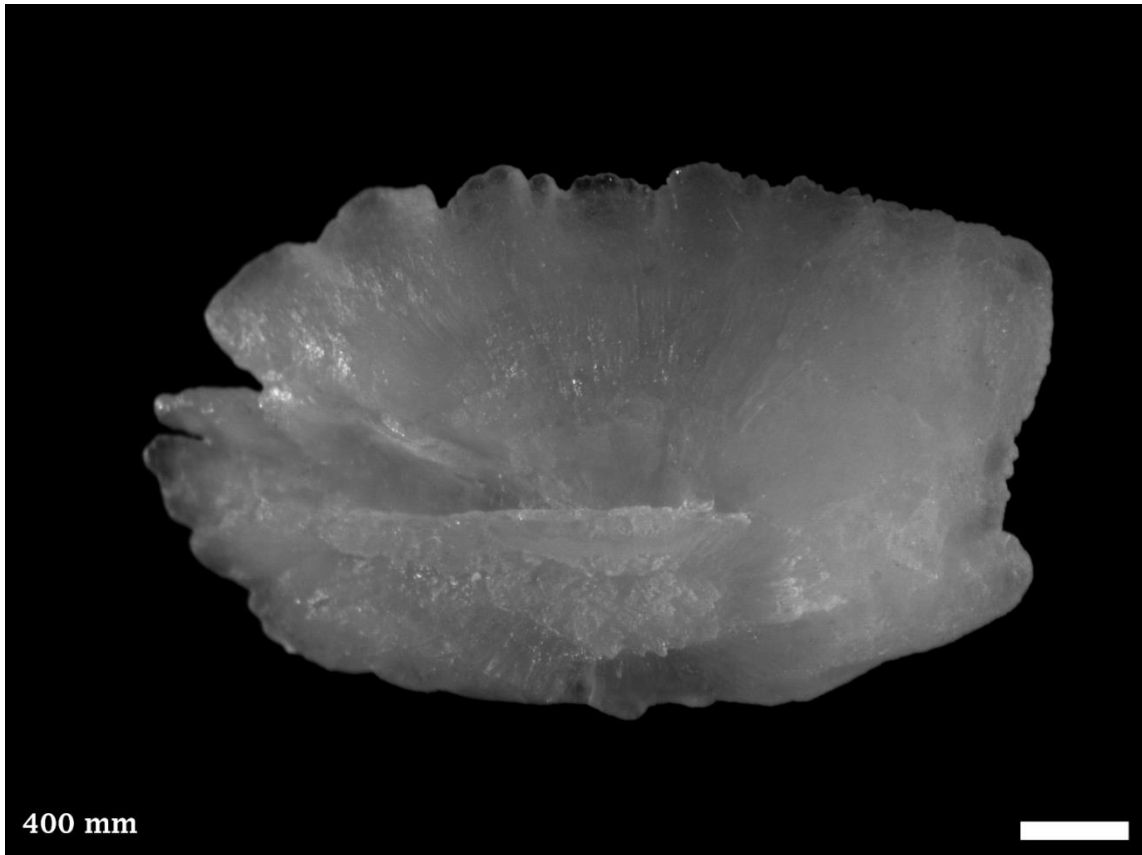


Distribution and Length: Deep waters from Fremantle, WA south around to Kangaroo Island, SA. 280 mm TL.



5.207 *Kathetostoma canaster*, Speckled Stargazer

PERCIFORMES URANOSCOPIDAE (Stargazers)

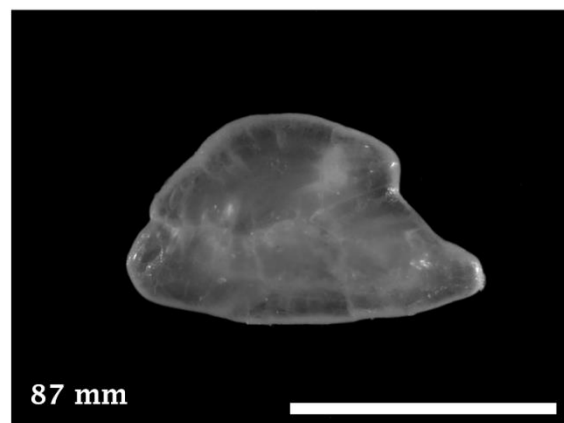
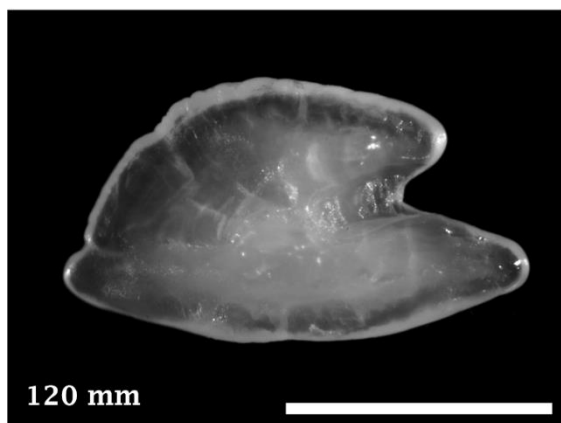
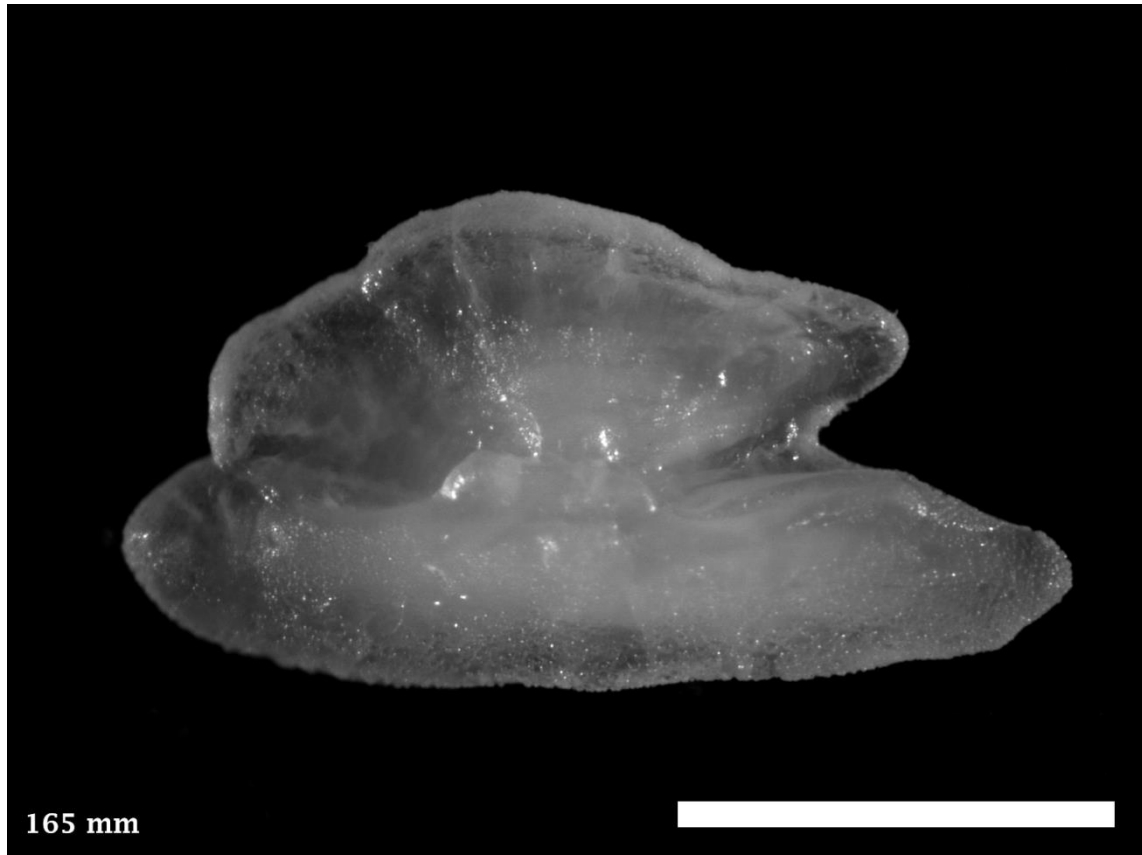


Distribution and Length: Deep sandy waters from Albany, WA around to southern New South Wales, including Tasmania. Note: Right otolith. 750 mm TL.



5.208 *Cristiceps australis*, Southern Crested Weedfish

PERCIFORMES CLINIDAE (weedfishes)

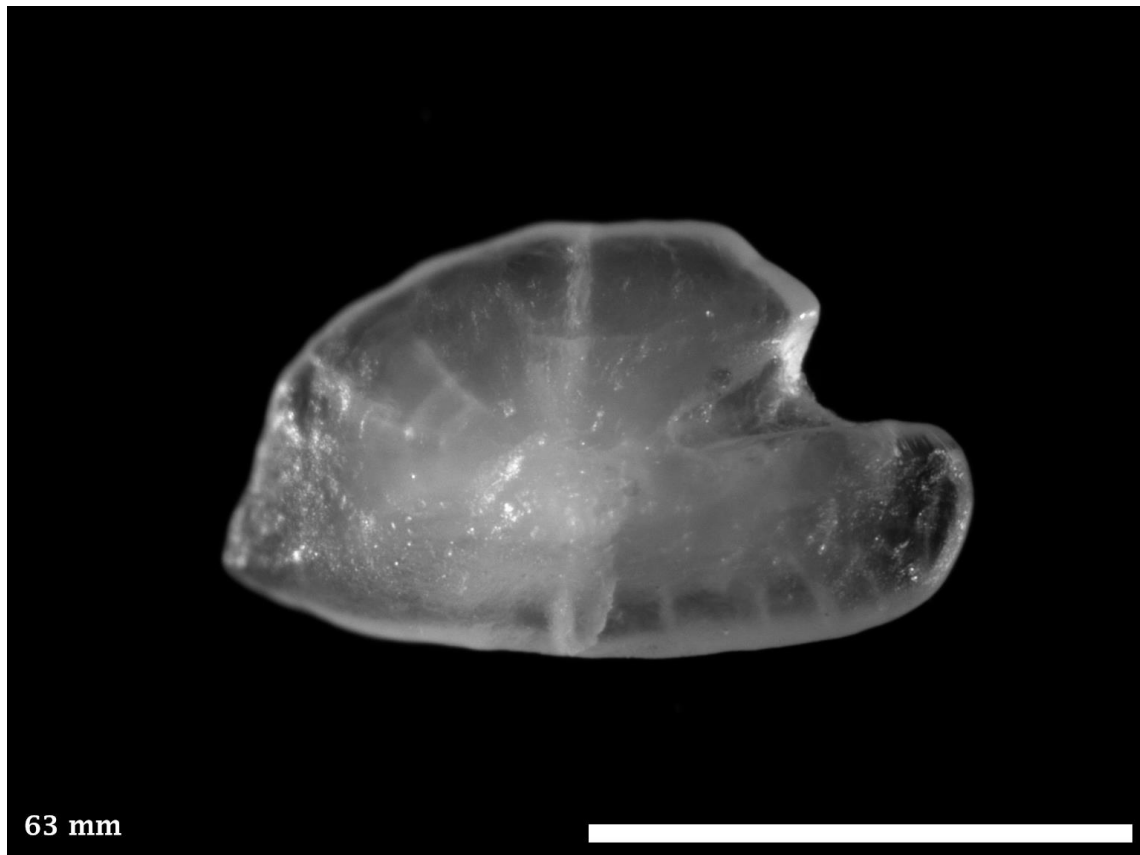


Distribution and Length: Coastal waters from Geraldton, WA south around to Broken Bay, NSW, including Tasmania. 300 mm TL.

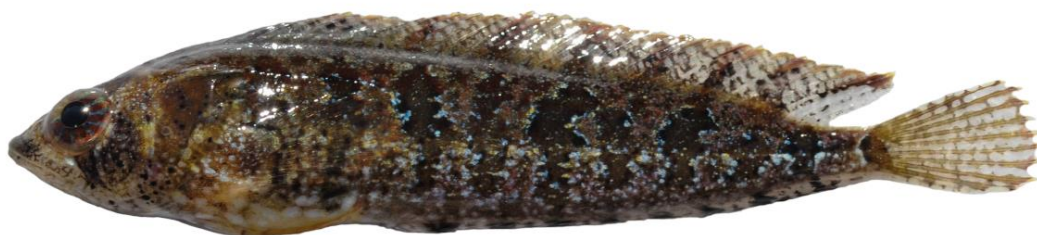


5.209 *Heteroclinus adalaidae*, Adelaide Weedfish

PERCIFORMES CLINIDAE (weedfishes)

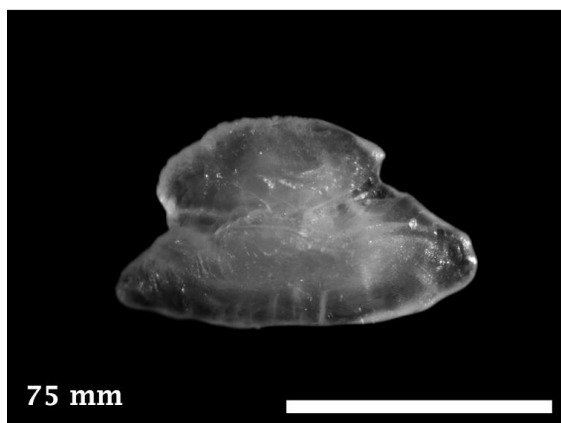
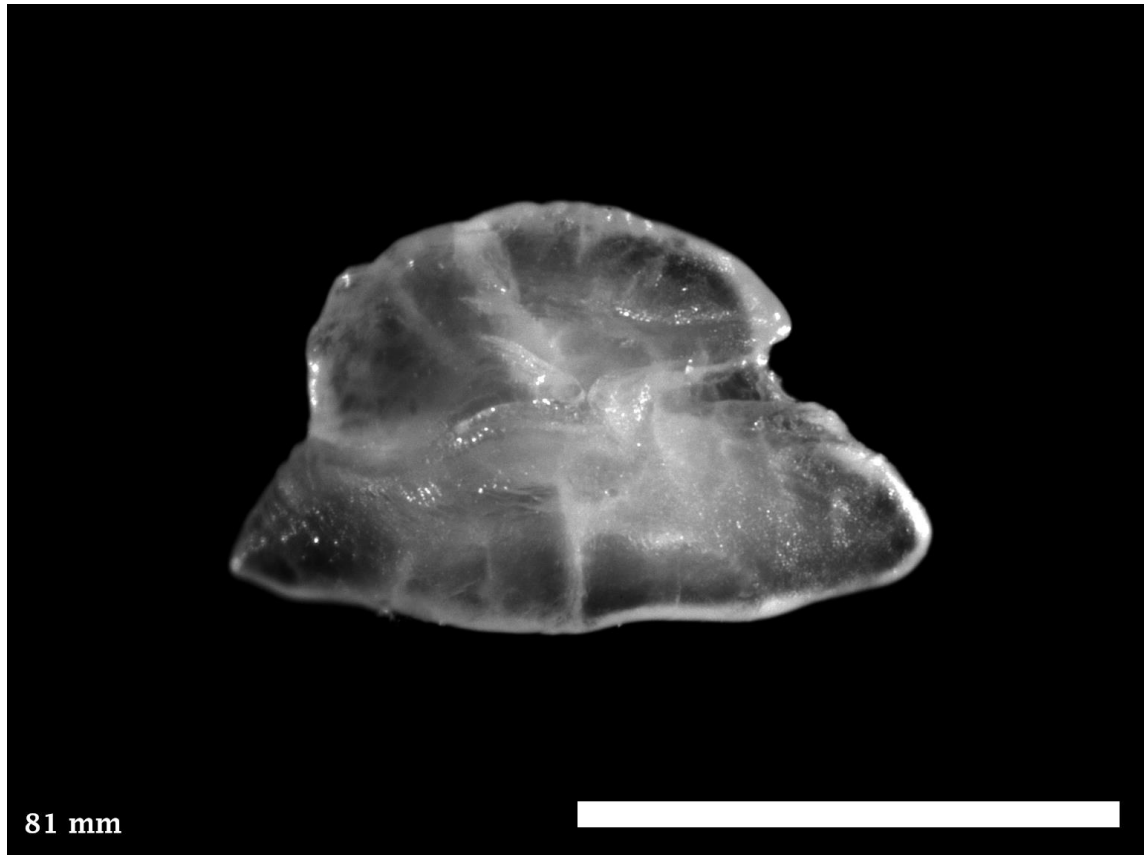


Distribution and Length: Coastal waters from Shark Bay, WA south around to Bass Strait, Victoria, including Tasmania. 90 mm TL.



5.210 *Heteroclinus roseus*, Rosy Weedfish

PERCIFORMES CLINIDAE (weedfishes)

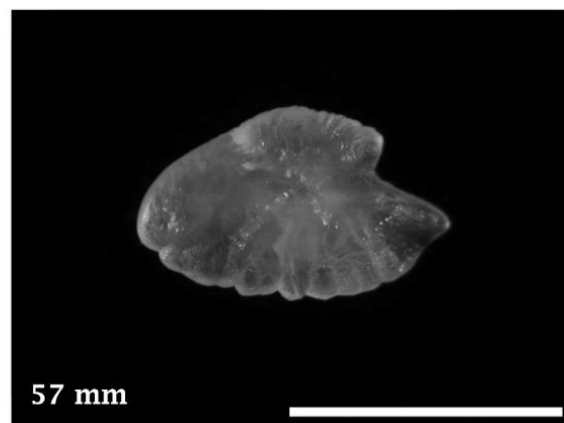
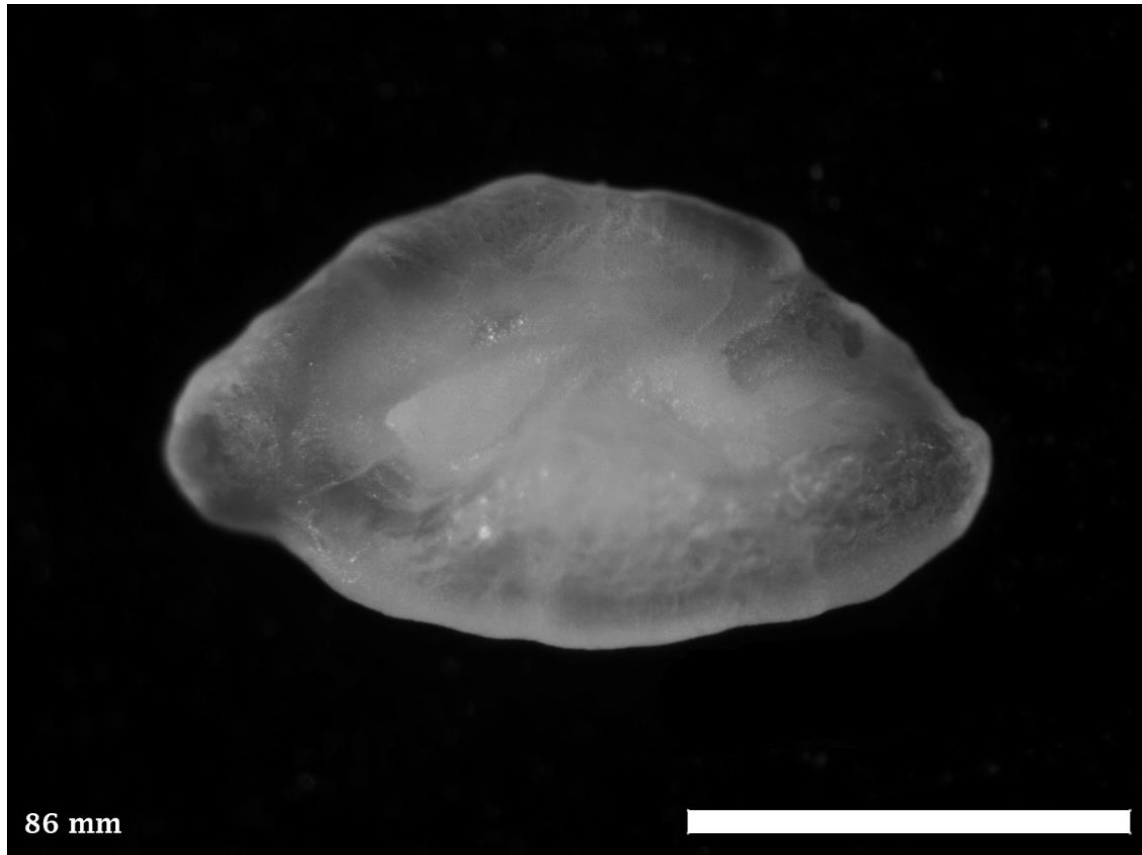


Distribution and Length: Coastal waters from Shark Bay, WA south around to Coffs Harbour, NSW. 145 mm TL.



5.211 *Parablennius postoculomaculatus*, False Tasmanian Blenny

PERCIFORMES BLENNIIDAE (Blennies)

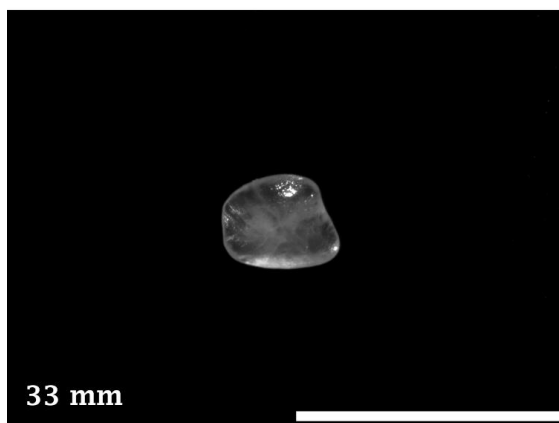
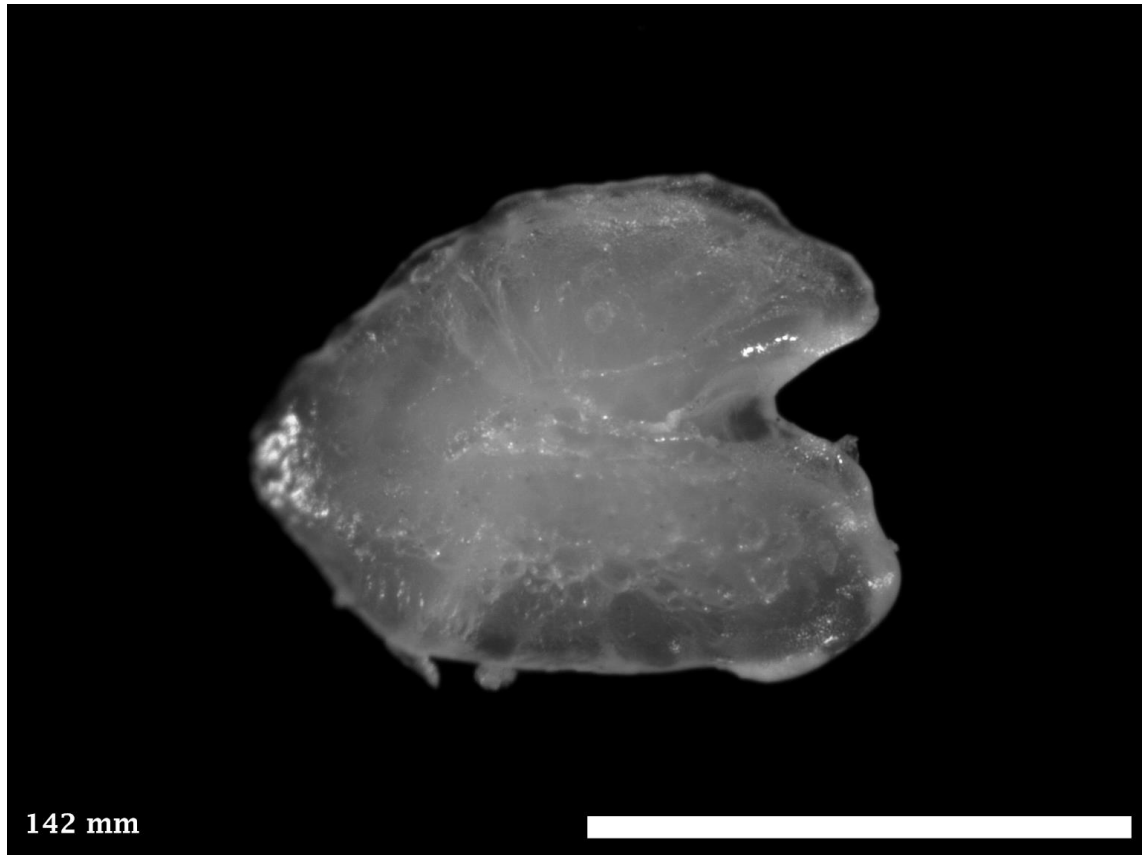


Distribution and Length: Coastal waters from North West Cape, WA south around to Recherche Archipelago, WA. 100 mm TL.



5.212 *Petroscirtes breviceps*, Shorthead Sabretooth Blenny

PERCIFORMES BLENNIIDAE (Blennies)

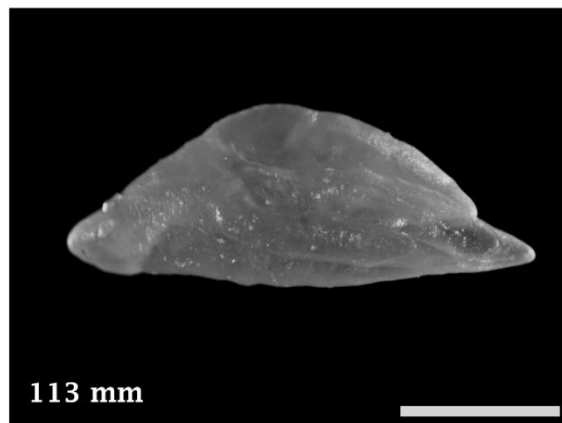
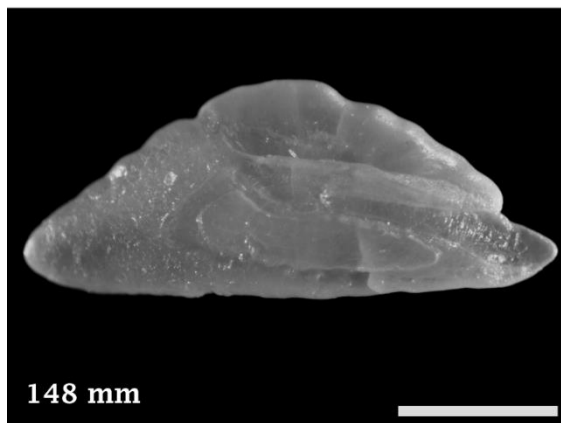
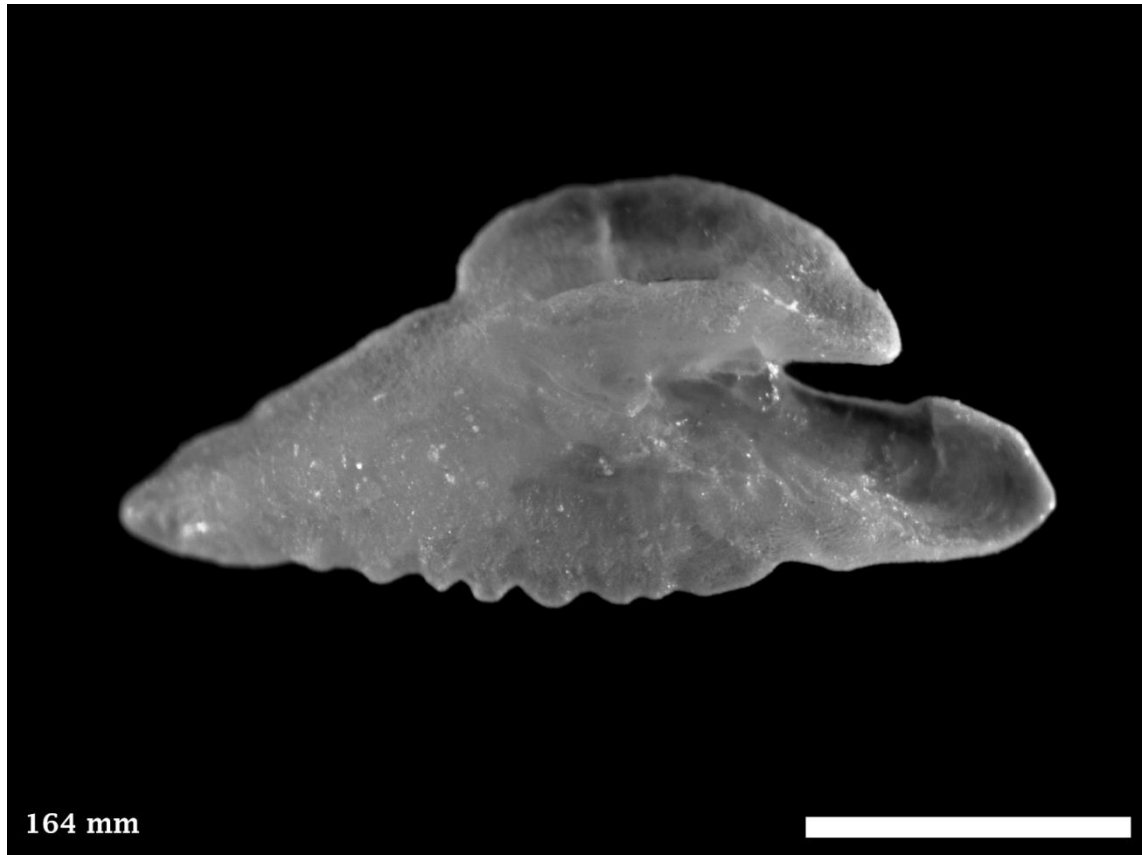


Distribution and Length: Coastal waters from Cockburn Sound, WA north to the Rowley Shoals, WA. 150 mm TL.



5.213 *Dactylopus dactylopus*, Finger Dragonet

PERCIFORMES CALLIONYMIDAE (Dragonets)

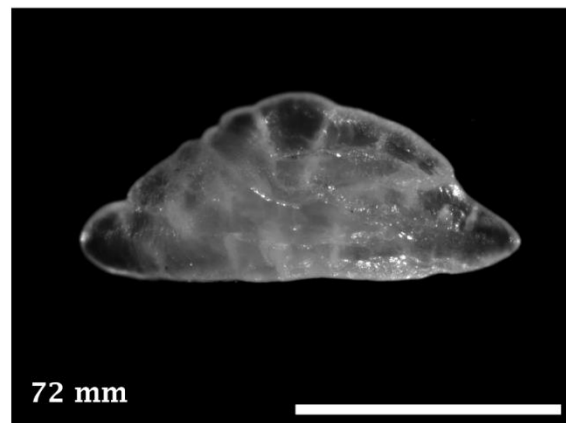
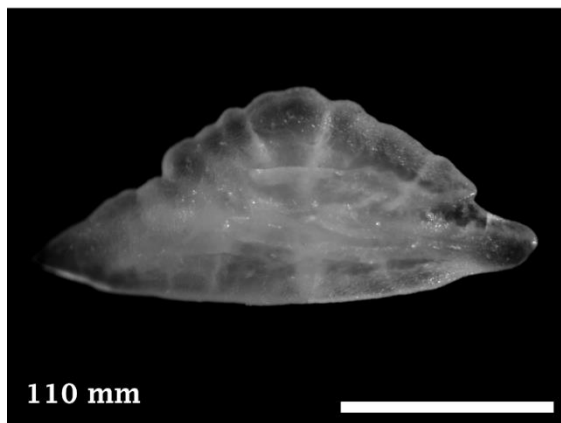
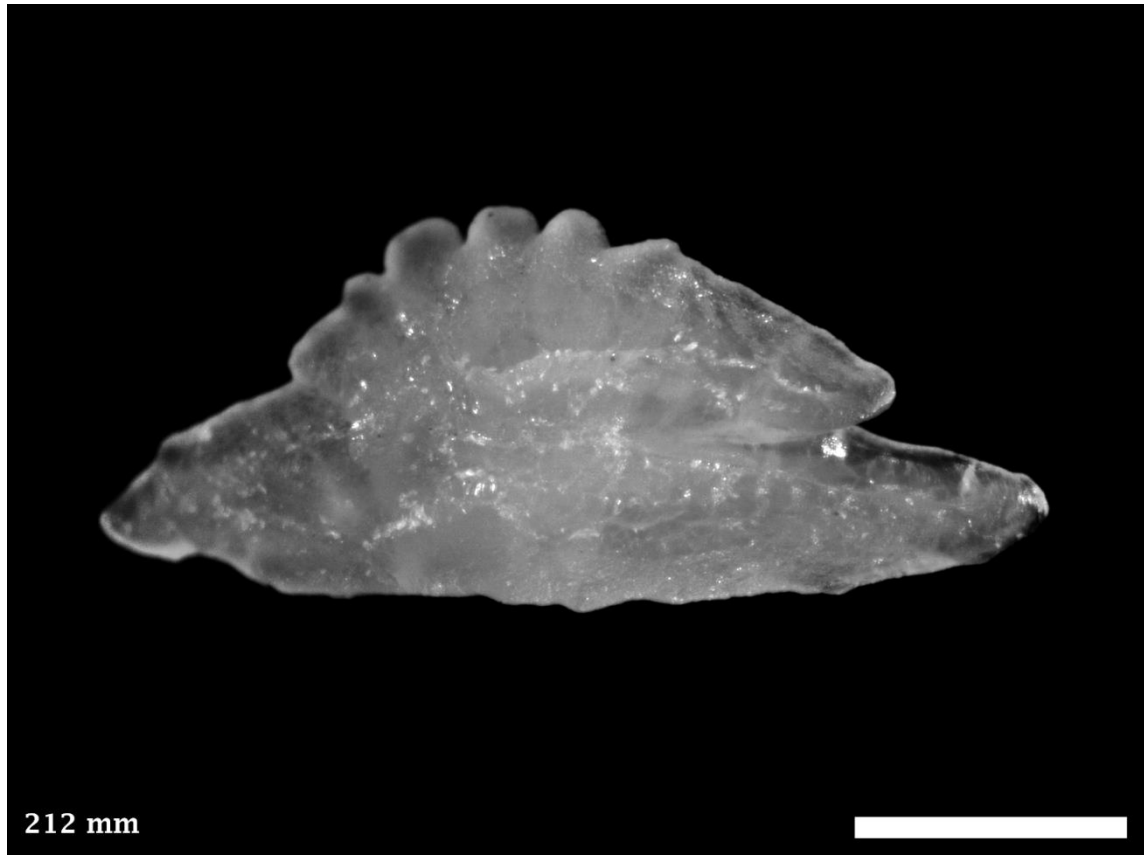


Distribution and Length: Coastal waters from Cockburn Sound, WA north around to Fraser Island, Qld. 300 mm TL.



5.214 *Pseudocalliurichthys goodladi*, Longspine Dragonet

PERCIFORMES CALLIONYMIDAE (Dragonets)

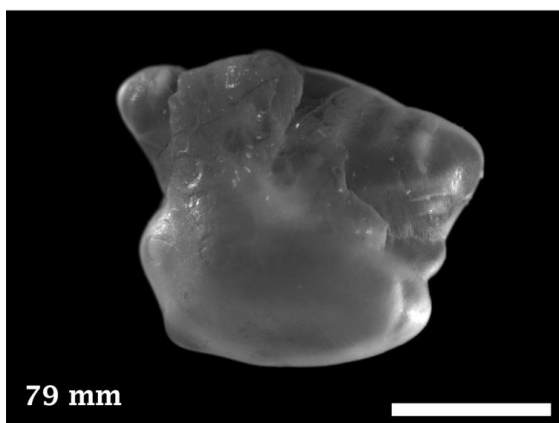
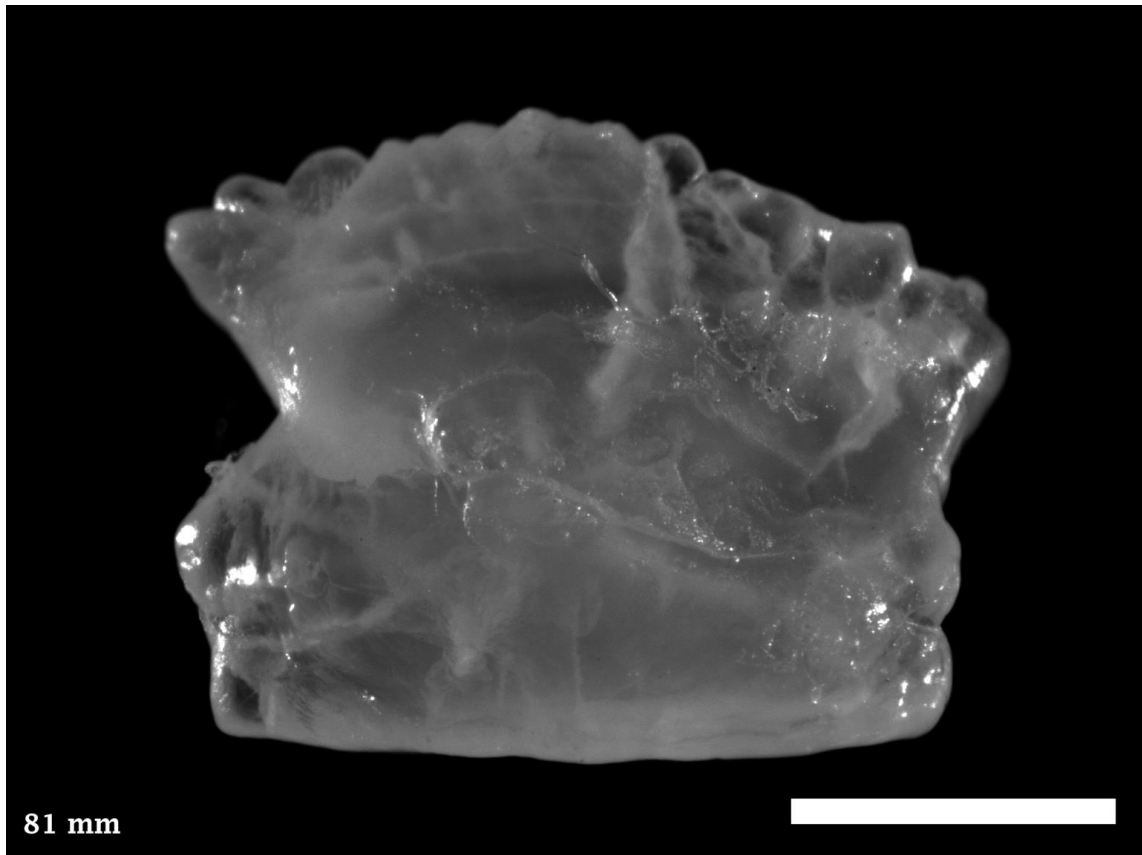


Distribution and Length: Coastal waters from Exmouth Gulf, WA south to Esperance, WA. 220 mm TL.

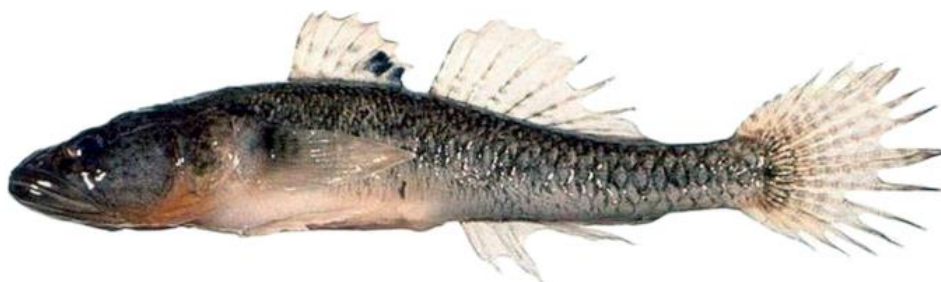


5.215 *Afurcagobius suppositus*, Southwestern Goby

PERCIFORMES GOBIIDAE (Gobies)

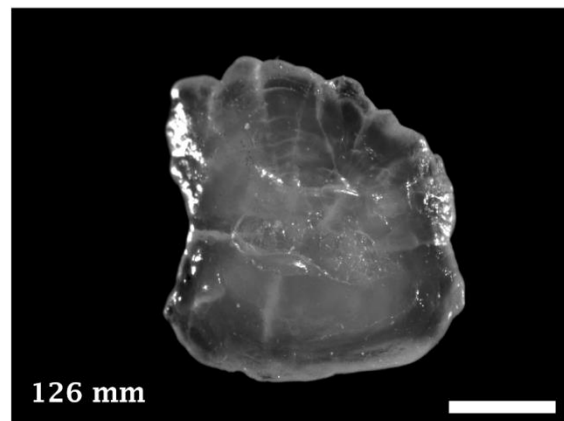
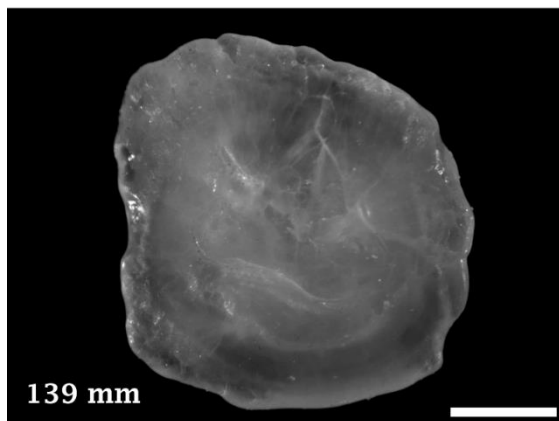
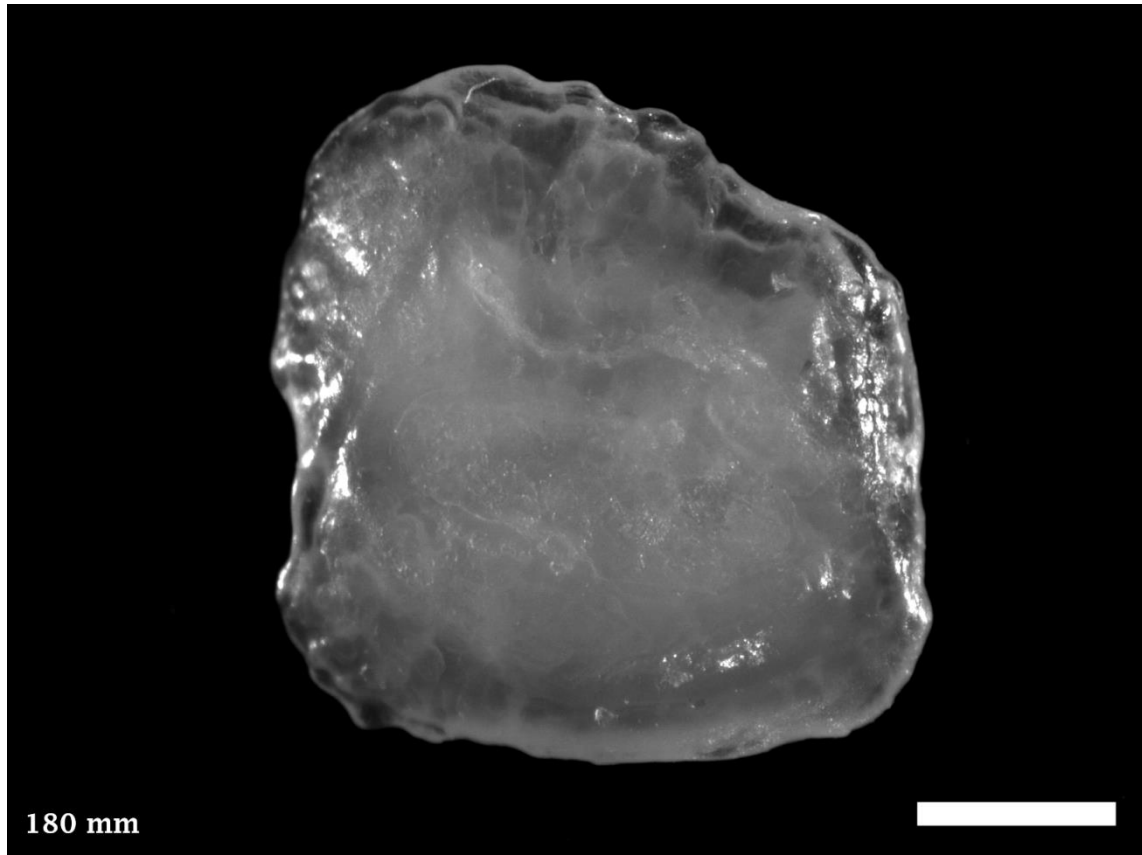


Distribution and Length: Estuarine and fresh waters from Moore River, WA south around to Wilson Inlet, WA. 110 mm SL.



5.216 *Arenigobius bifrenatus*, Bridled Goby

PERCIFORMES GOBIIDAE (Gobies)

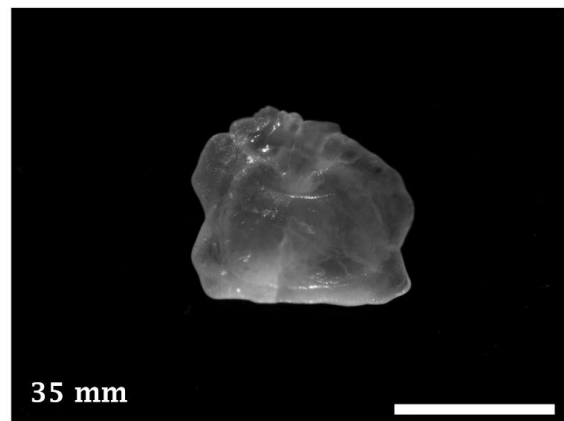
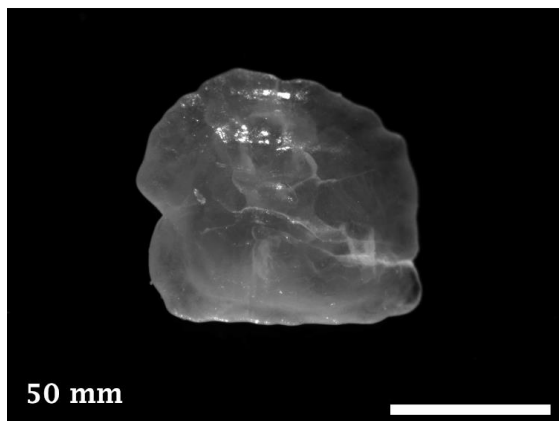
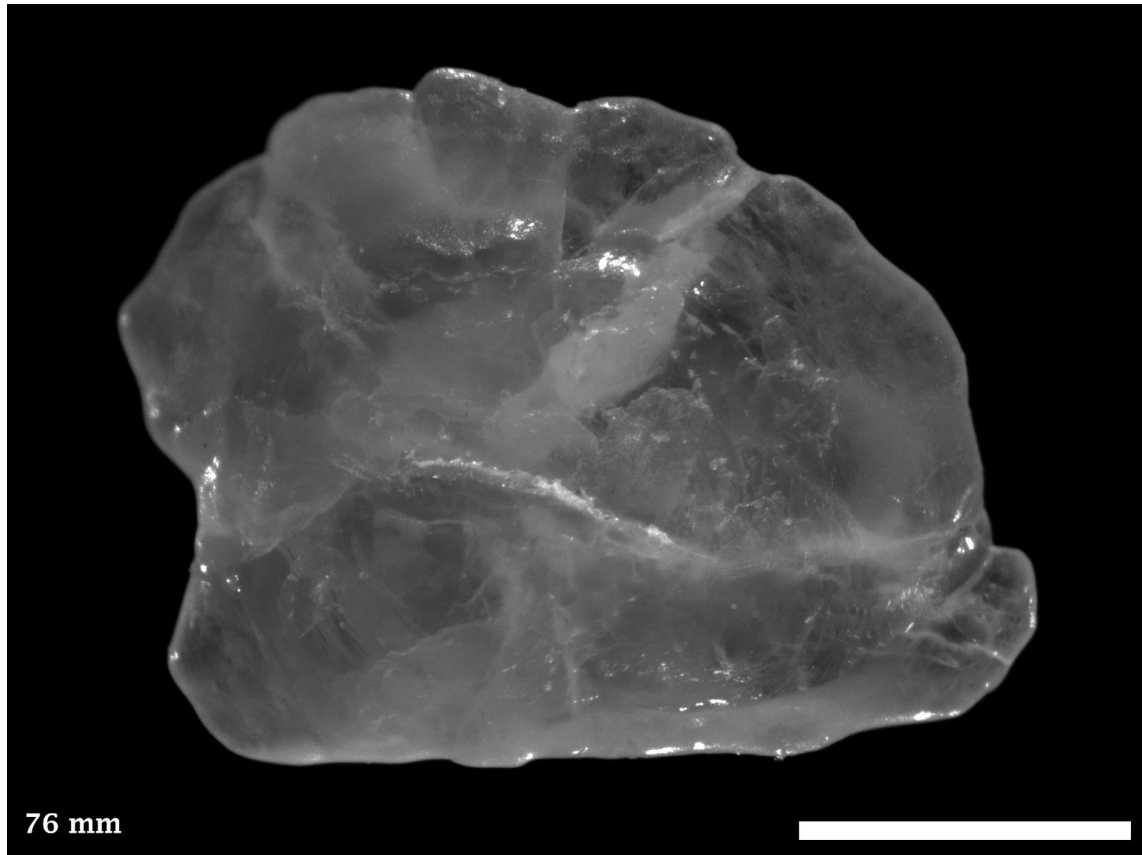


Distribution and Length: Estuarine and coastal waters from Fremantle, WA south around to Morton Bay, Qld, including Tasmania. 180 mm TL.



5.217 *Favonigobius lateralis*, Southern Longfin Goby

PERCIFORMES GOBIIDAE (Gobies)

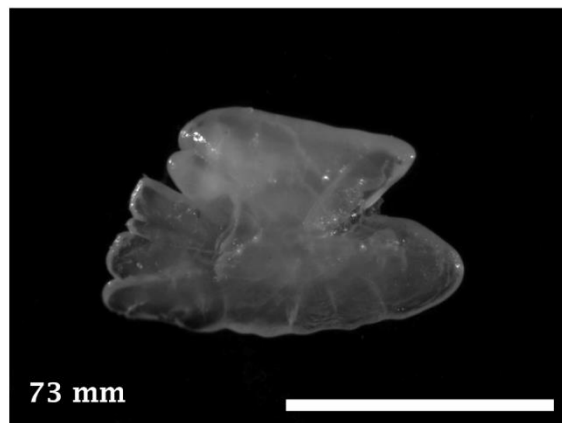
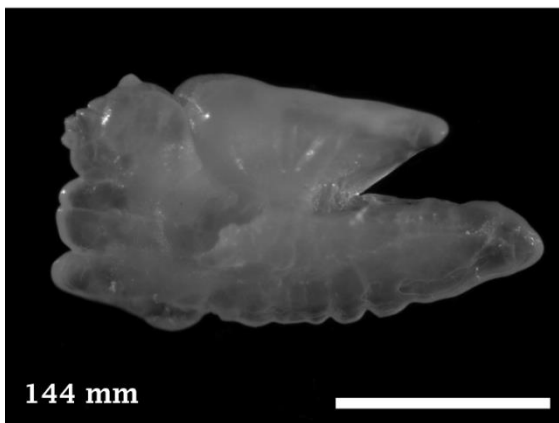
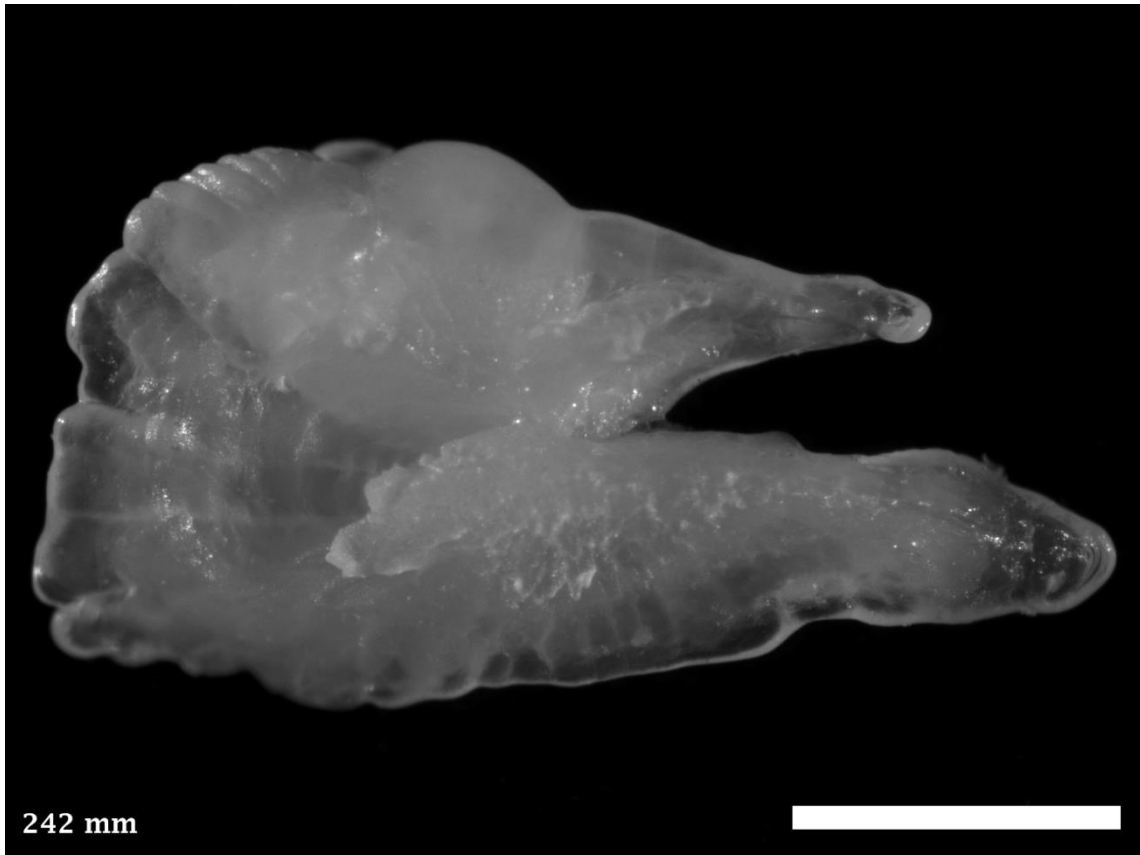


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south around to southern Queensland, including Tasmania. 90 mm TL.



5.218 *Siganus fuscescens*, Black Rabbitfish

PERCIFORMES SIGANIDAE (Rabbitfishes)

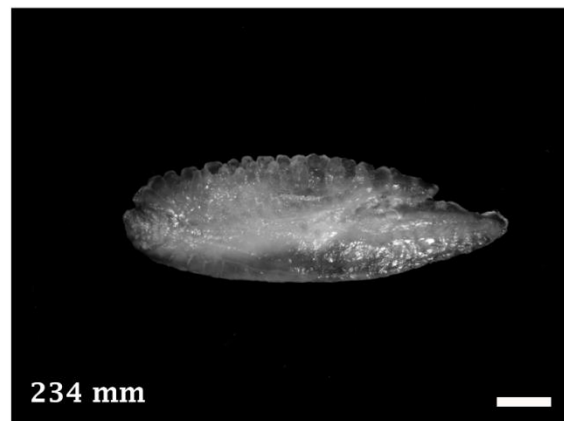
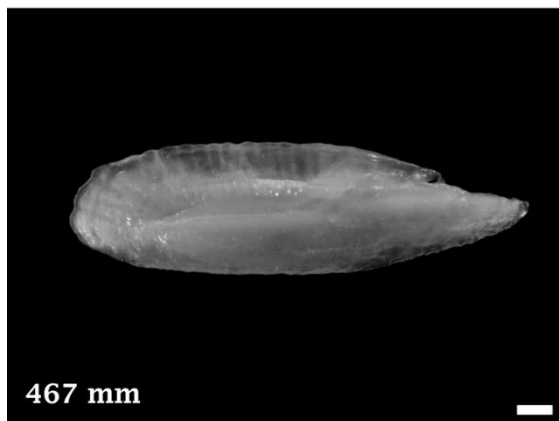
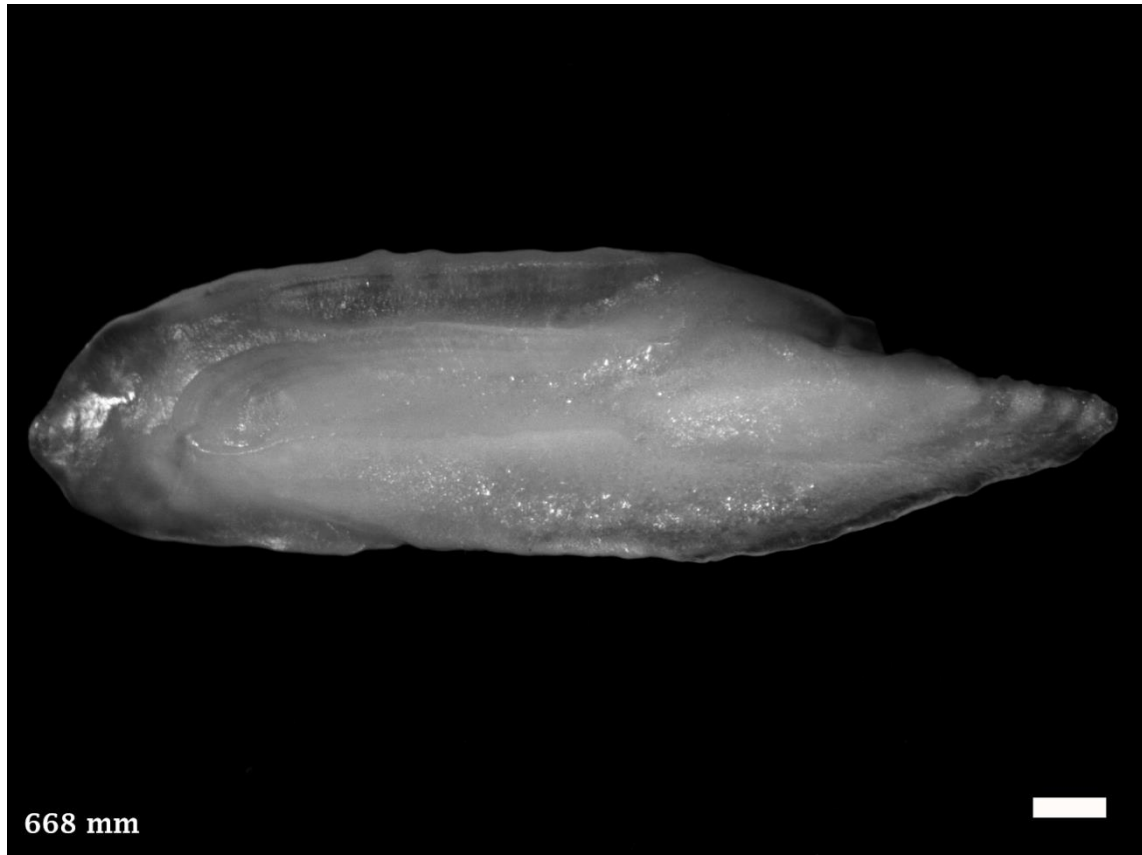


Distribution and Length: Estuarine and coastal waters from Geographe Bay, WA north around to Eden, NSW. 410 mm TL.



5.219 *Sphyraena novaehollandiae*, Snook

PERCIFORMES SPHYRAENIDAE (Pikes)

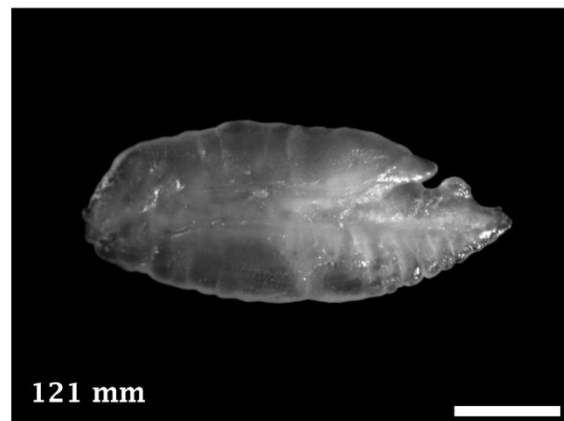
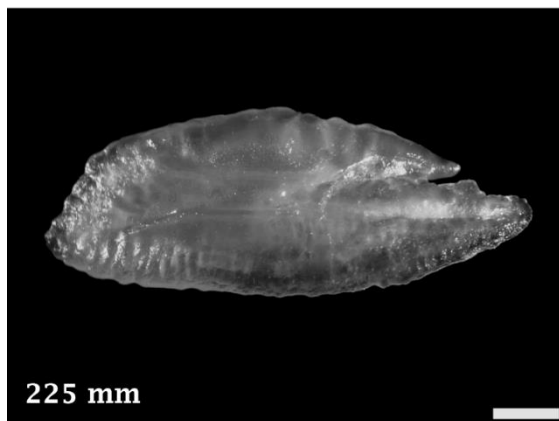
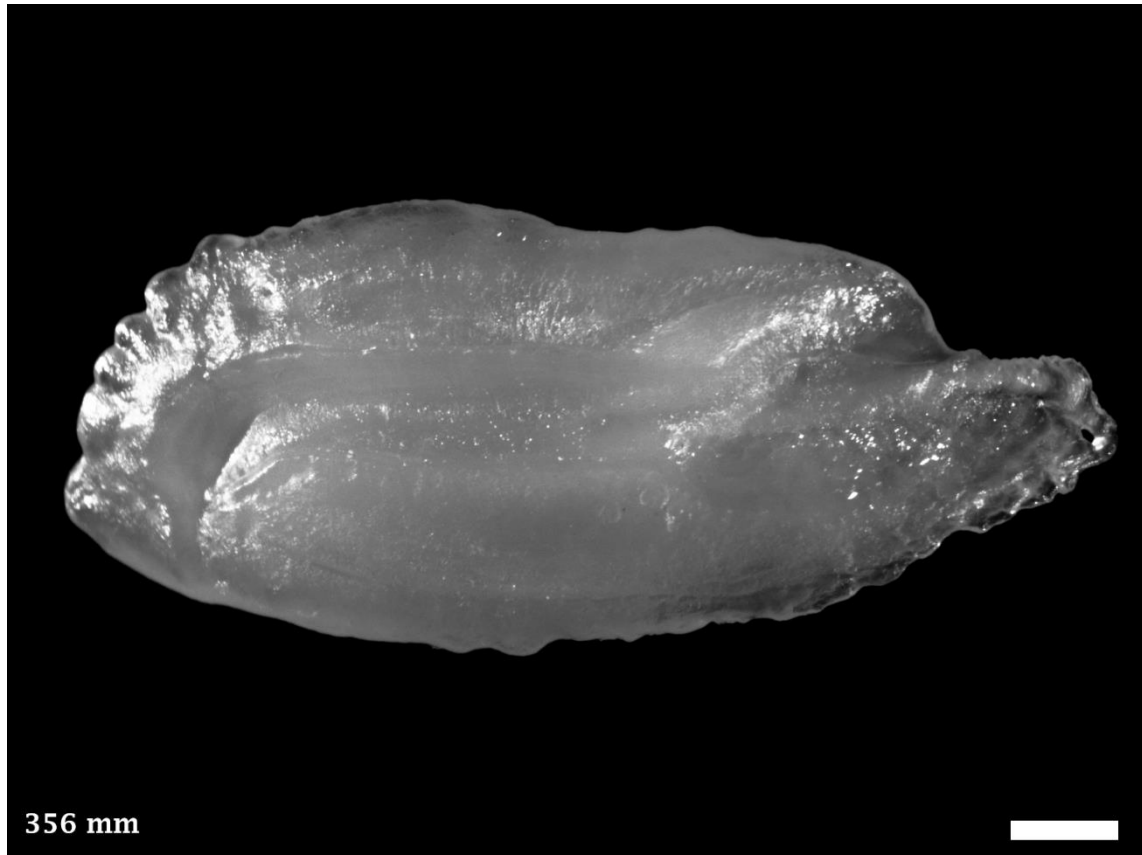


Distribution and Length: Offshore and coastal waters from Jurien Bay, WA south around to southern Queensland, including Tasmania. 1100 mm TL.



5.220 *Sphyraena obtusata*, Yellowtail Barracuda

PERCIFORMES SPHYRAENIDAE (Pikes)



Distribution and Length: Estuarine and coastal waters from Cheynes Beach, WA north around to Sydney, NSW. 550 mm TL.



5.221 *Ruvettus pretiosus*, Oilfish

PERCIFORMES GEMPYLIDAE (Gemfishes)

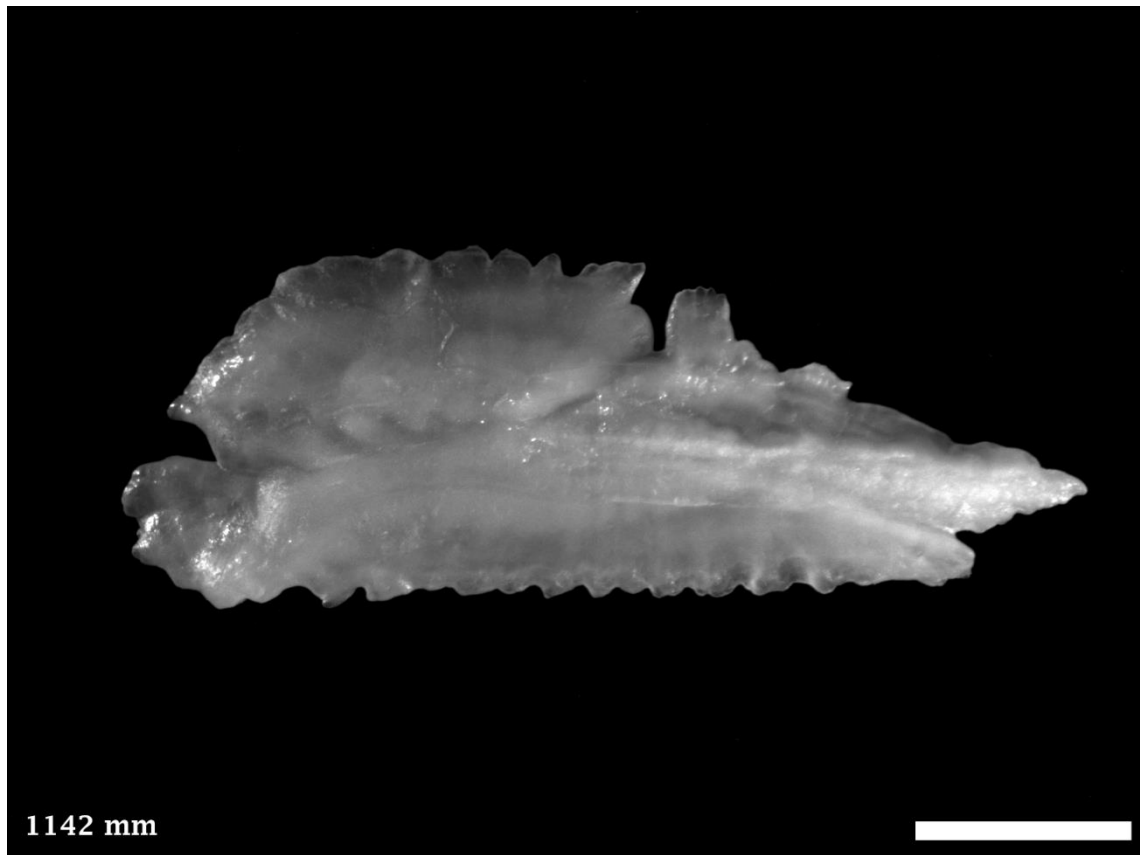


Distribution and Length: Deep offshore waters from Broome, WA south around to southern Queensland, including Tasmania. 1600 mm TL.



5.222 *Thyrsites atun*, Barracouta

PERCIFORMES GEMPYLIDAE (Gemfishes)

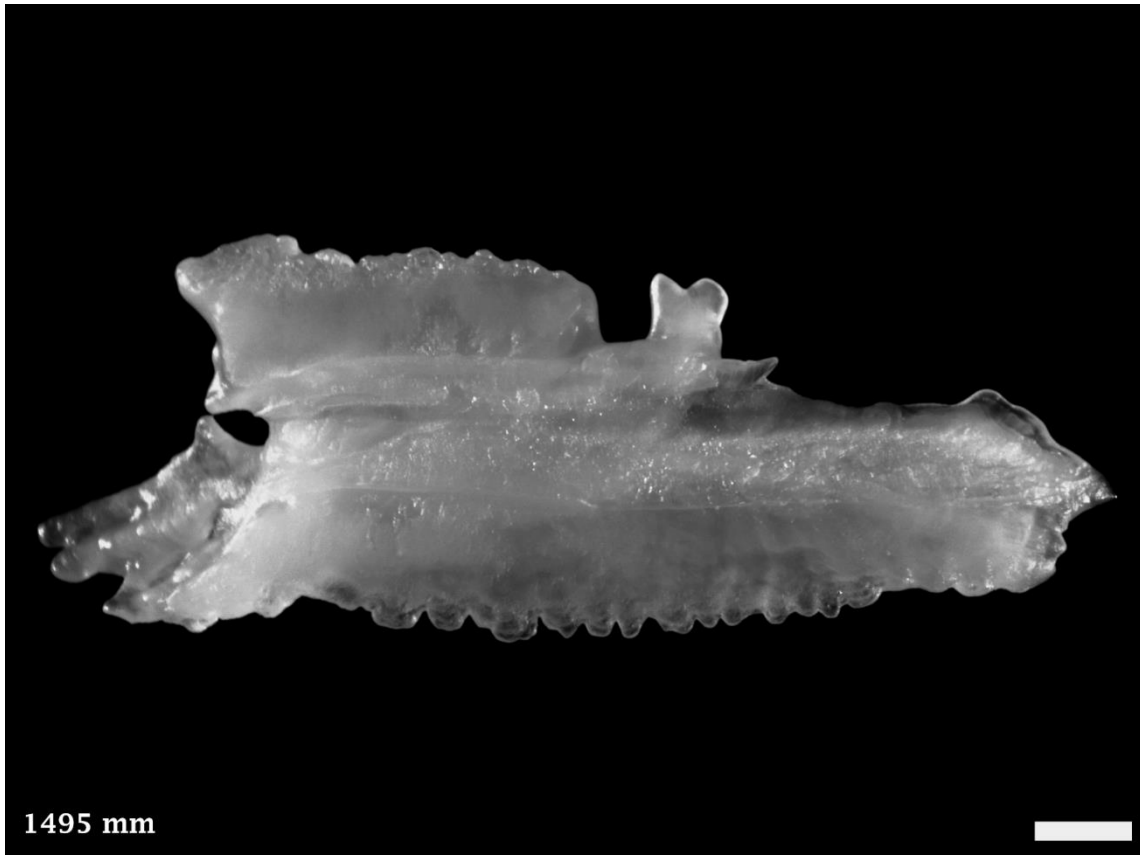


Distribution and Length: Estuarine to deep offshore waters from Shark Bay, WA south around to southern Queensland, including Tasmania. 1500 mm TL.



5.223 *Thyrsitoides marleyi*, Black Snoek

PERCIFORMES GEMPYLIDAE (Gemfishes)

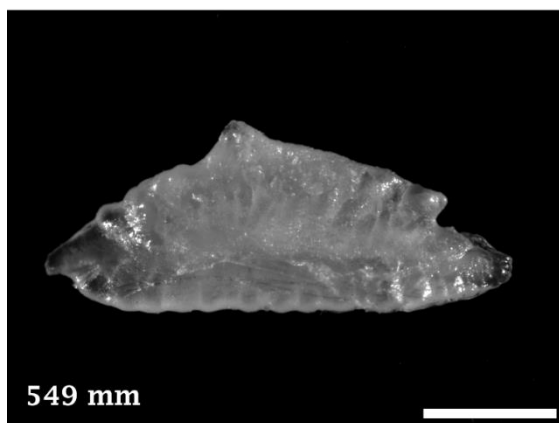
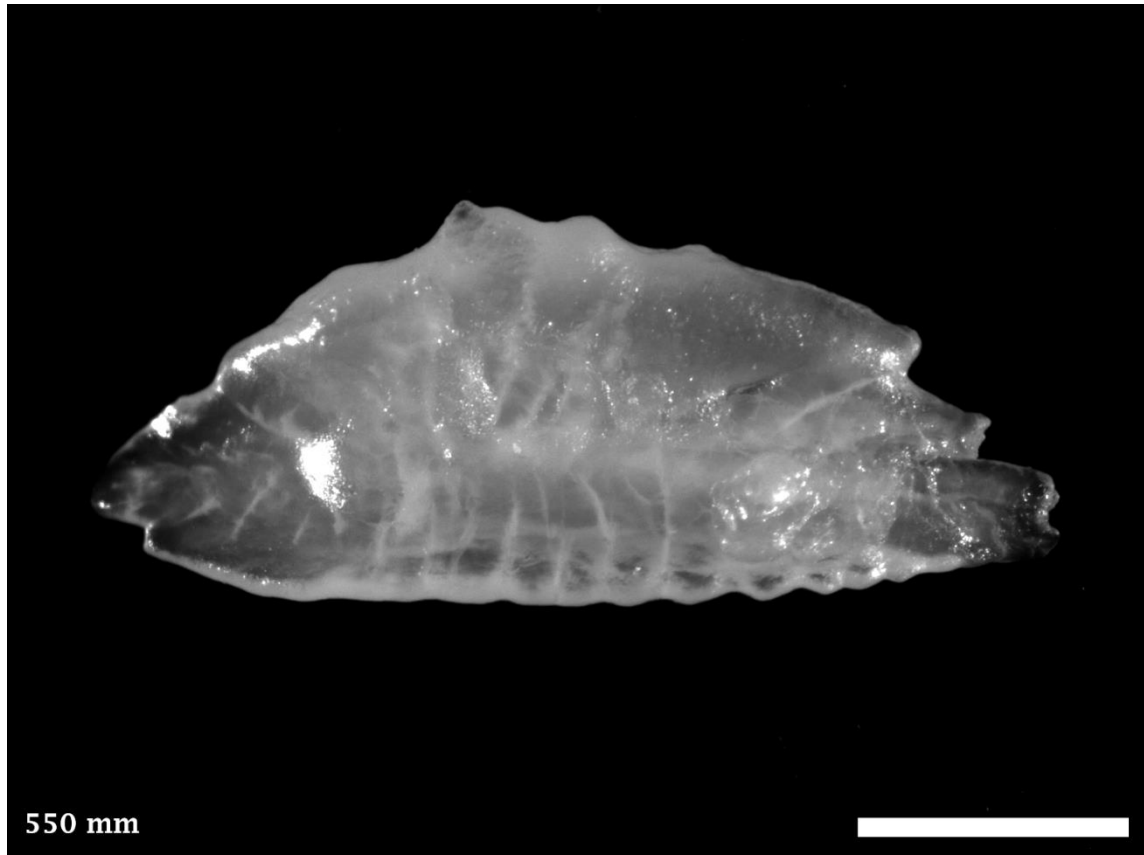


Distribution and Length: Deep offshore waters from Exmouth, WA south to Cape Naturaliste, WA (Nakamura and Parin 2001). 1500 mm SL.



5.224 *Trichiurus lepturus*, Largehead Hairtail

PERCIFORMES TRICHIURIDAE (Cutlassfishes)

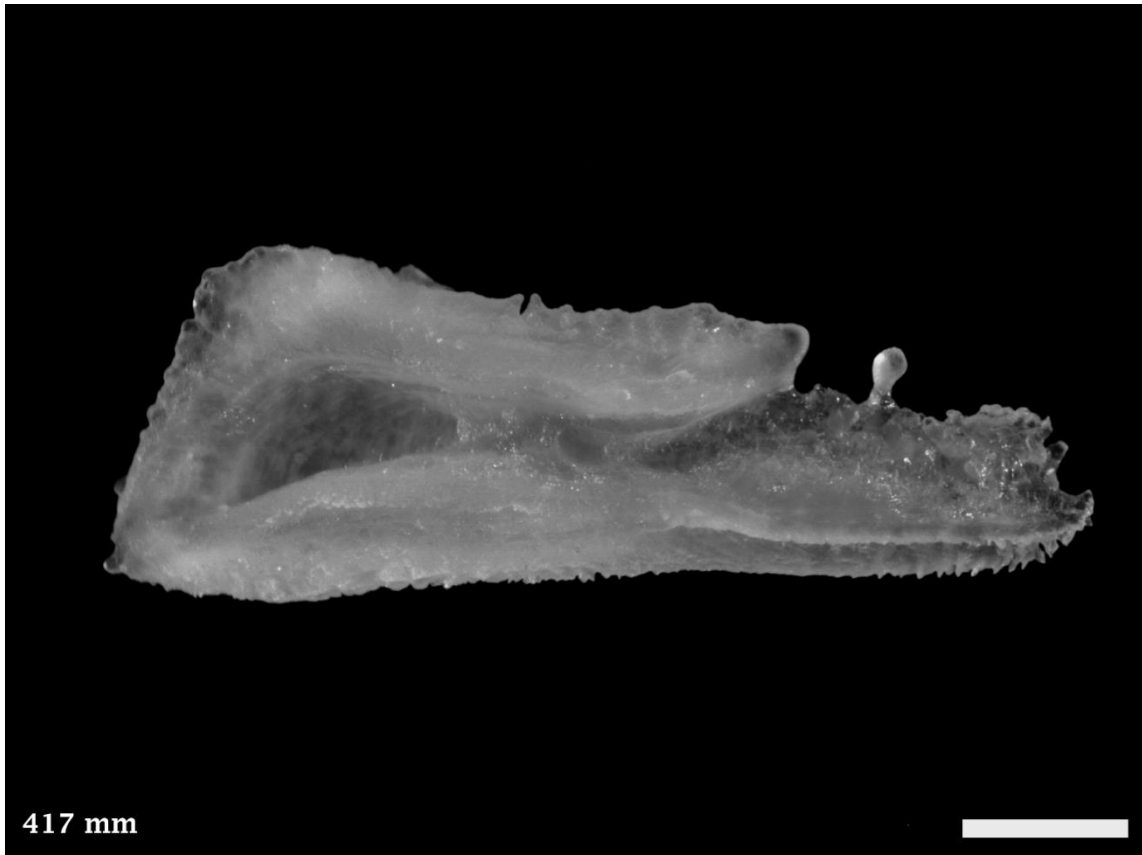


Distribution and Length: Estuarine and coastal waters circum-Australia. 2340 mm TL.



5.225 *Cybiosarda elegans*, Leaping Bonito

PERCIFORMES SCOMBRIDAE (Mackerels)

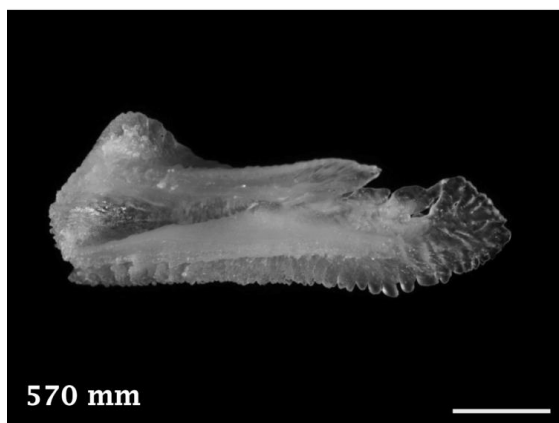
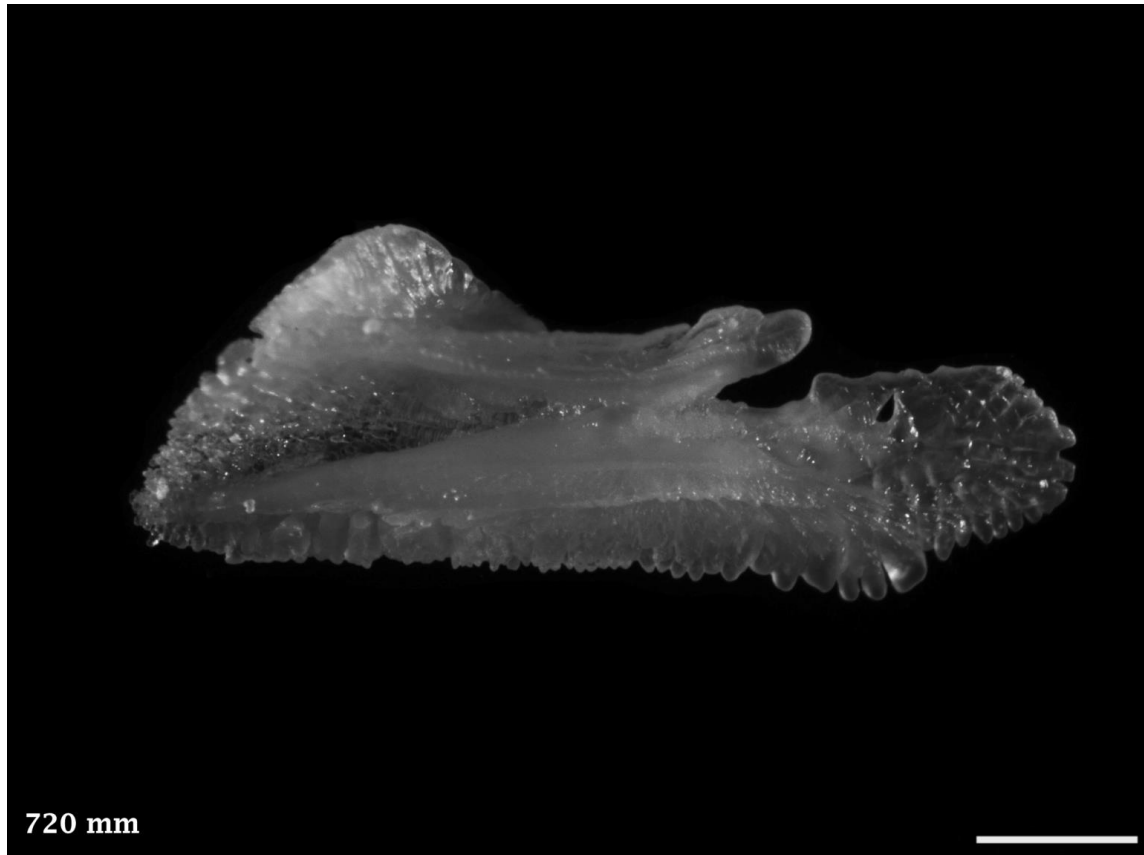


Distribution and Length: Coastal and offshore waters from Albany, WA north around to southern NSW. 540 mm TL.



5.226 *Katsuwonus pelamis*, Skipjack Tuna

PERCIFORMES SCOMBRIDAE (Mackerels)

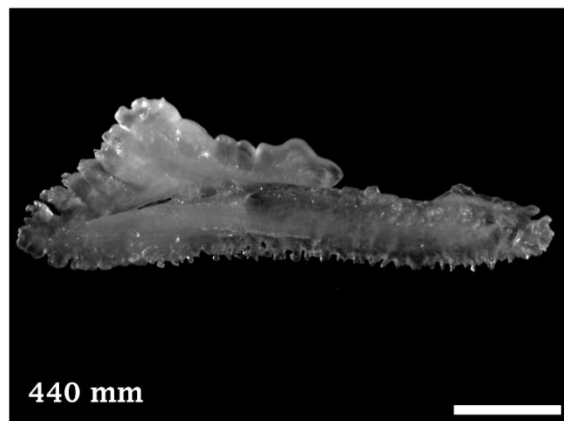
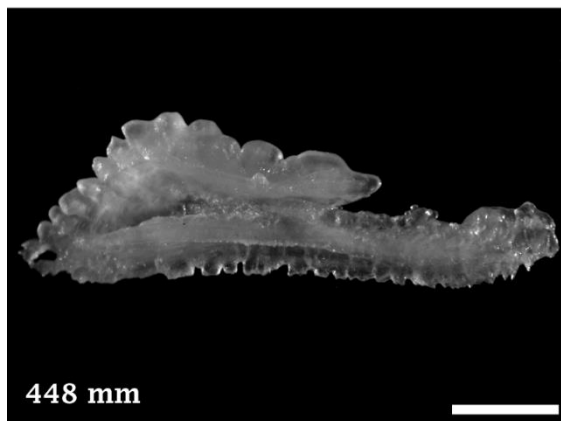
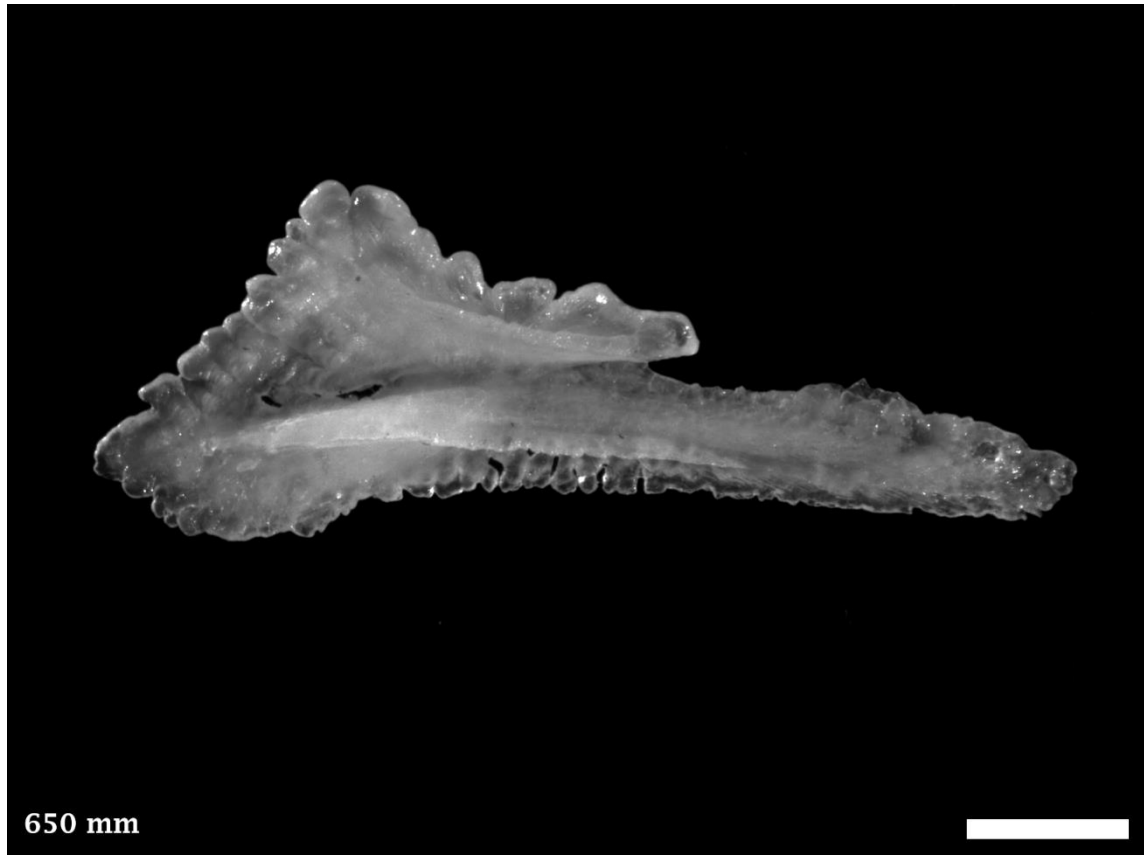


Distribution and Length: Coastal and offshore waters circum-Australia. 1080 mm TL.



5.227 *Sarda orientalis*, Australian Bonito

PERCIFORMES SCOMBRIDAE (Mackerels)

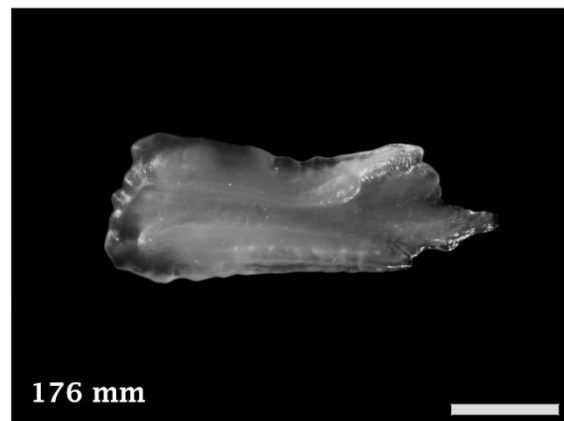
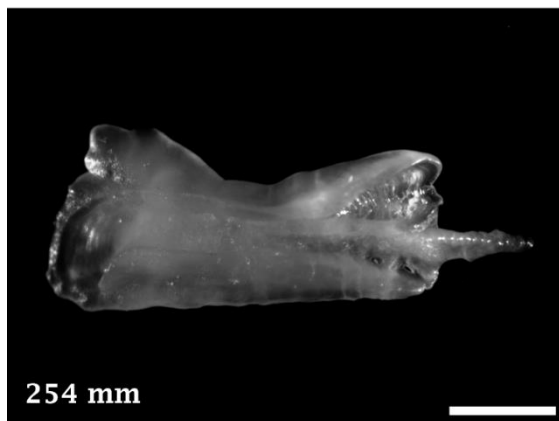
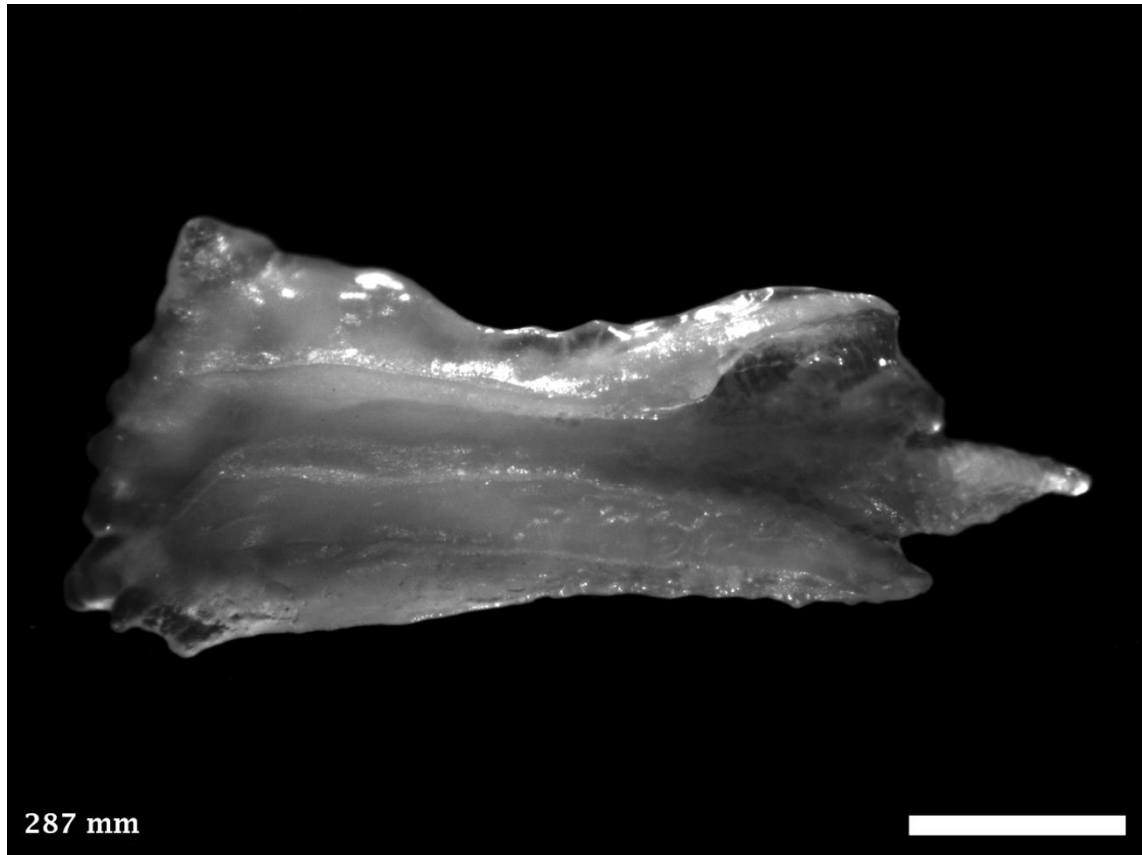


Distribution and Length: Coastal and offshore waters from Shark Bay, WA south around to the Great Australian Bight. 1020 mm TL



5.228 *Scomber australasicus*, Blue Mackerel

PERCIFORMES SCOMBRIDAE (Mackerels)

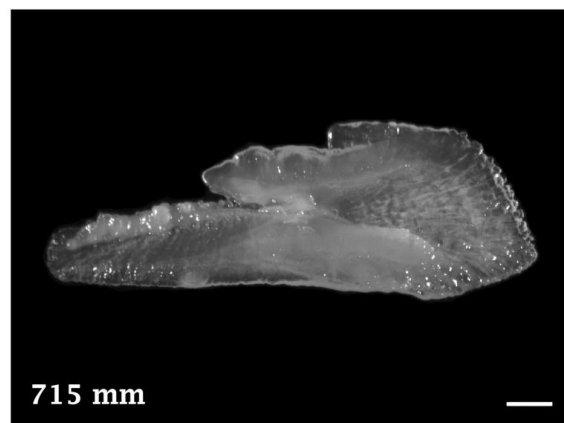
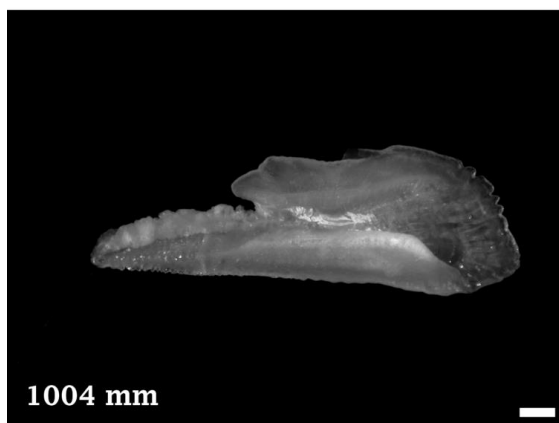
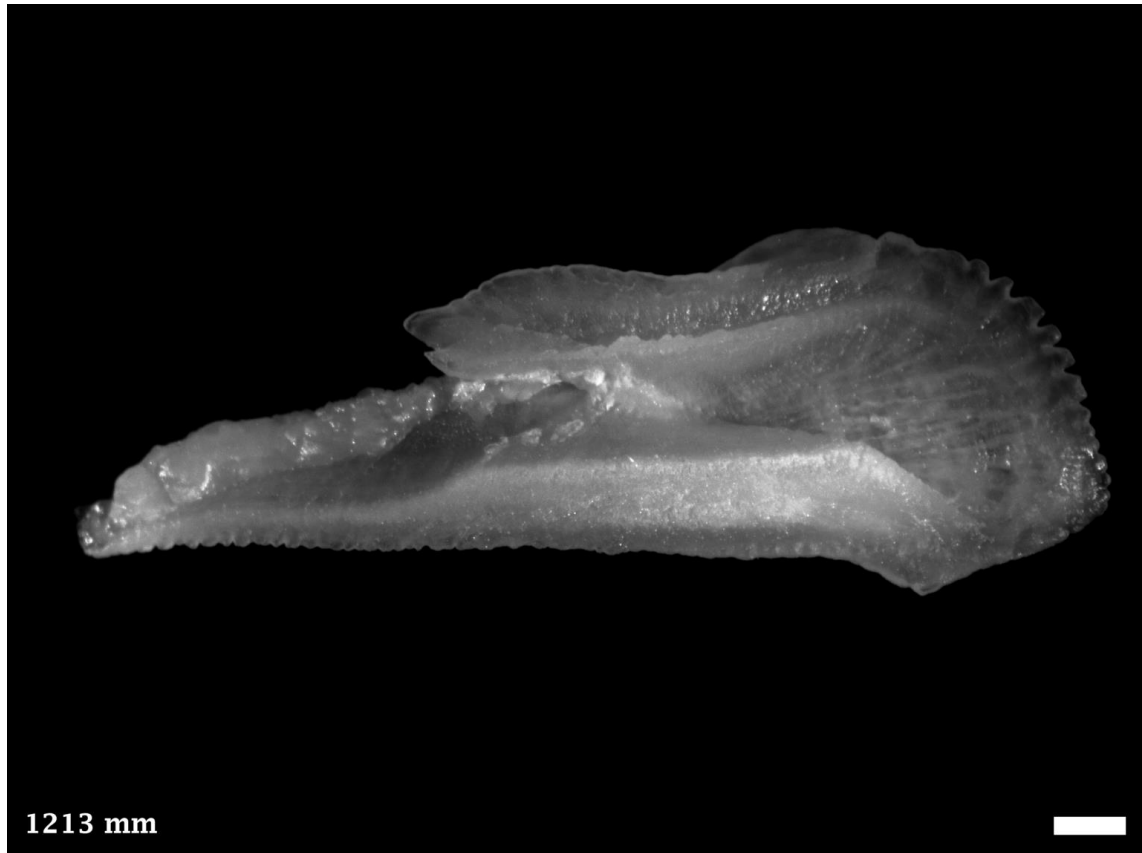


Distribution and Length: Coastal and offshore waters circum-Australia. 650 mm TL.



5.229 *Scomberomorus commerson*, Spanish Mackerel

PERCIFORMES SCOMBRIDAE (Mackerels)

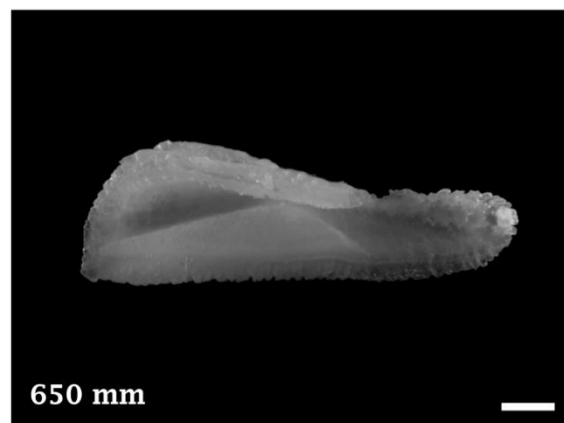
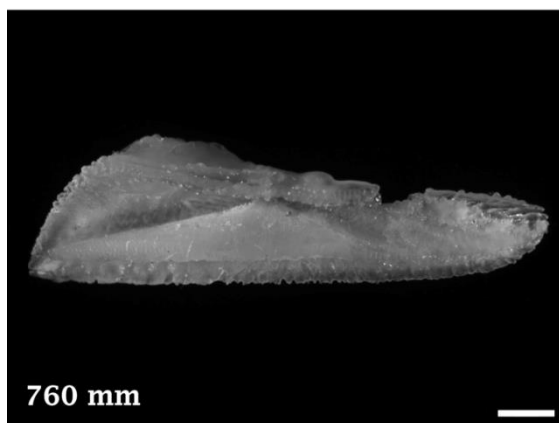
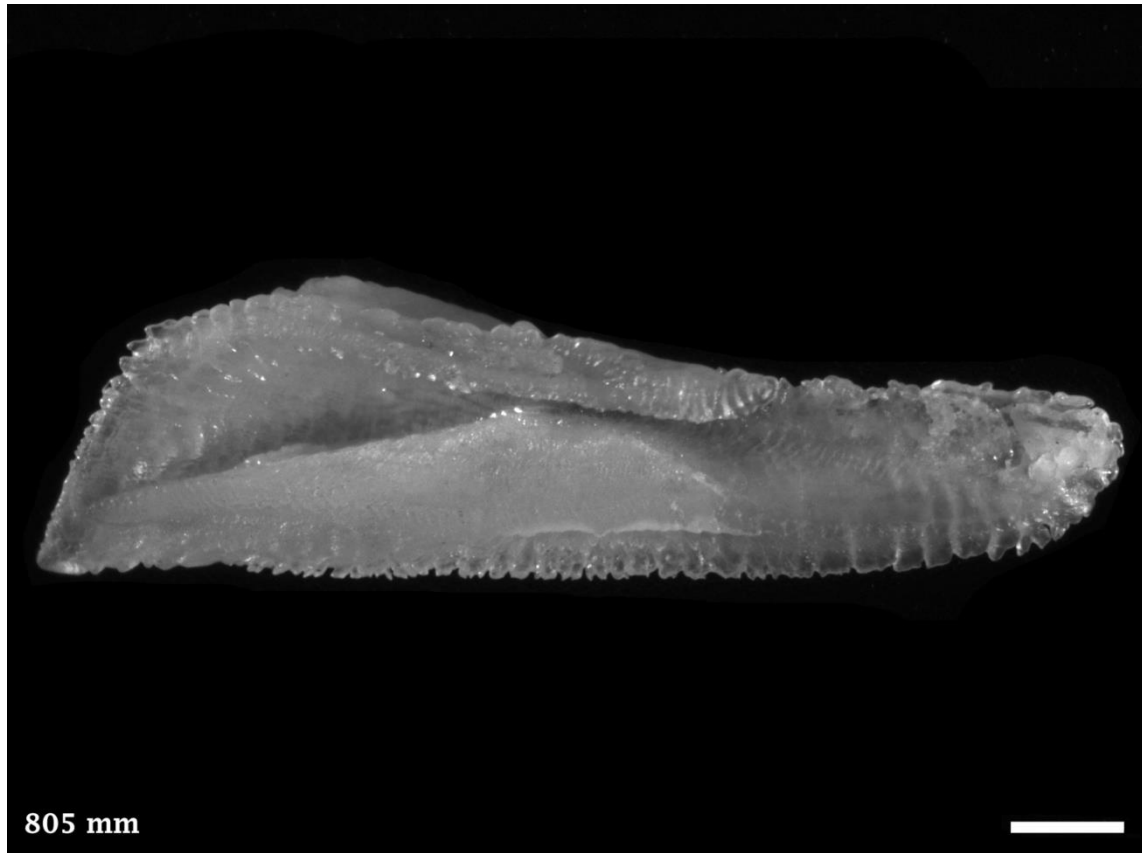


Distribution and Length: Coastal and offshore waters from Geographe Bay, WA north around to Montague Island, NSW. Note: Right otoliths. 2350 mm TL.

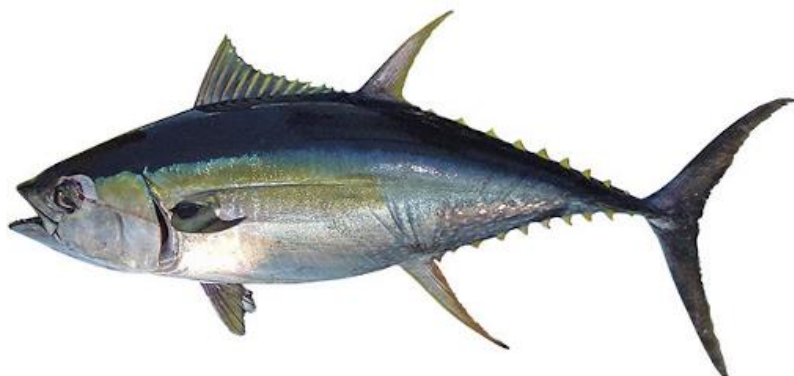


5.230 *Thunnus albacares*, Yellowfin Tuna

PERCIFORMES SCOMBRIDAE (Mackerels)

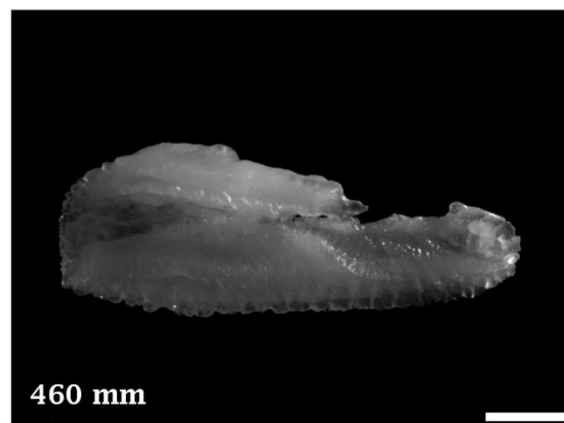
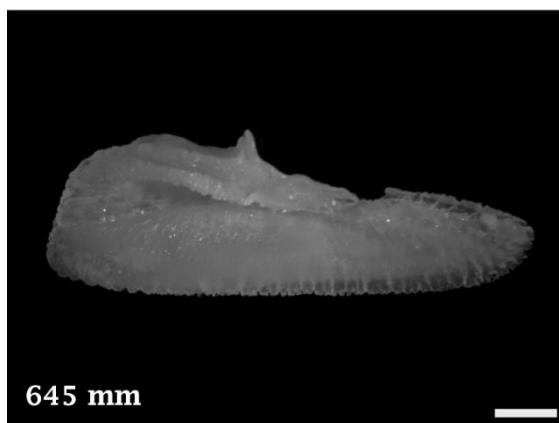
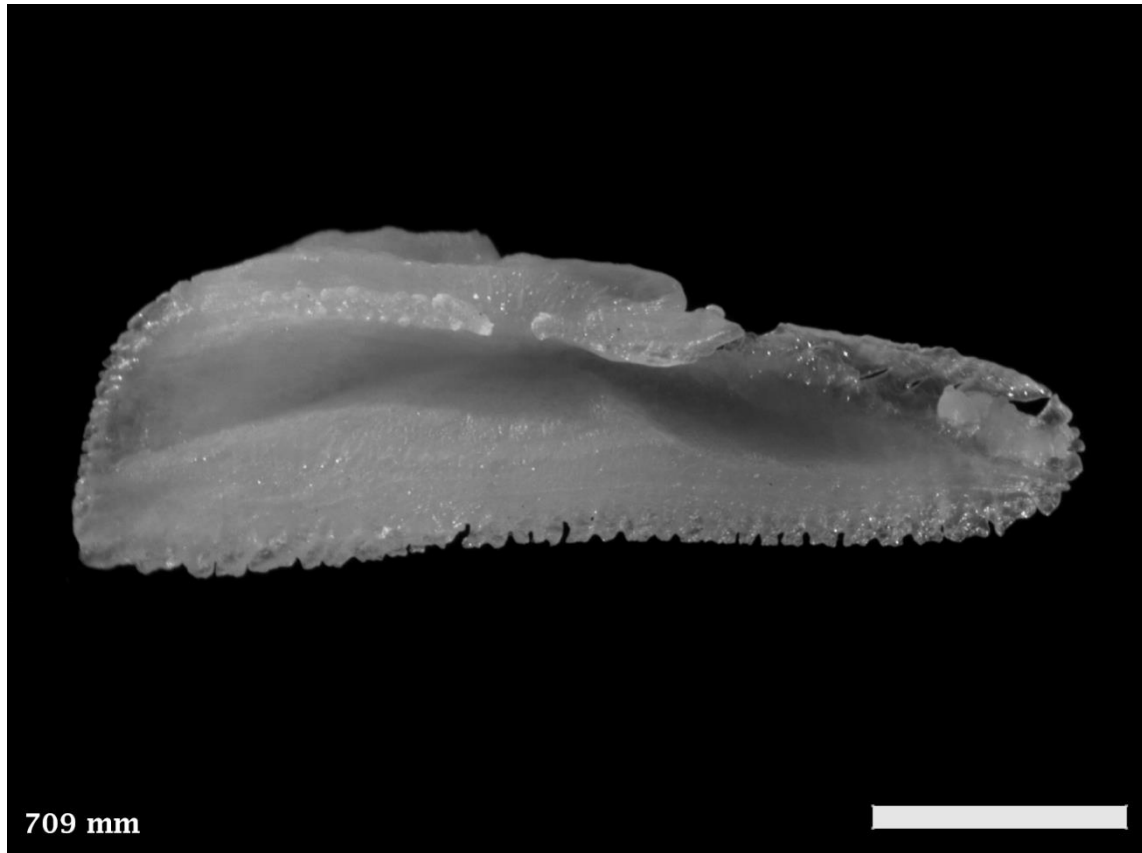


Distribution and Length: Offshore waters circum-Australia. 2100 mm FL.



5.231 *Thunnus maccoyii*, Southern Bluefin Tuna

PERCIFORMES SCOMBRIDAE (Mackerels)

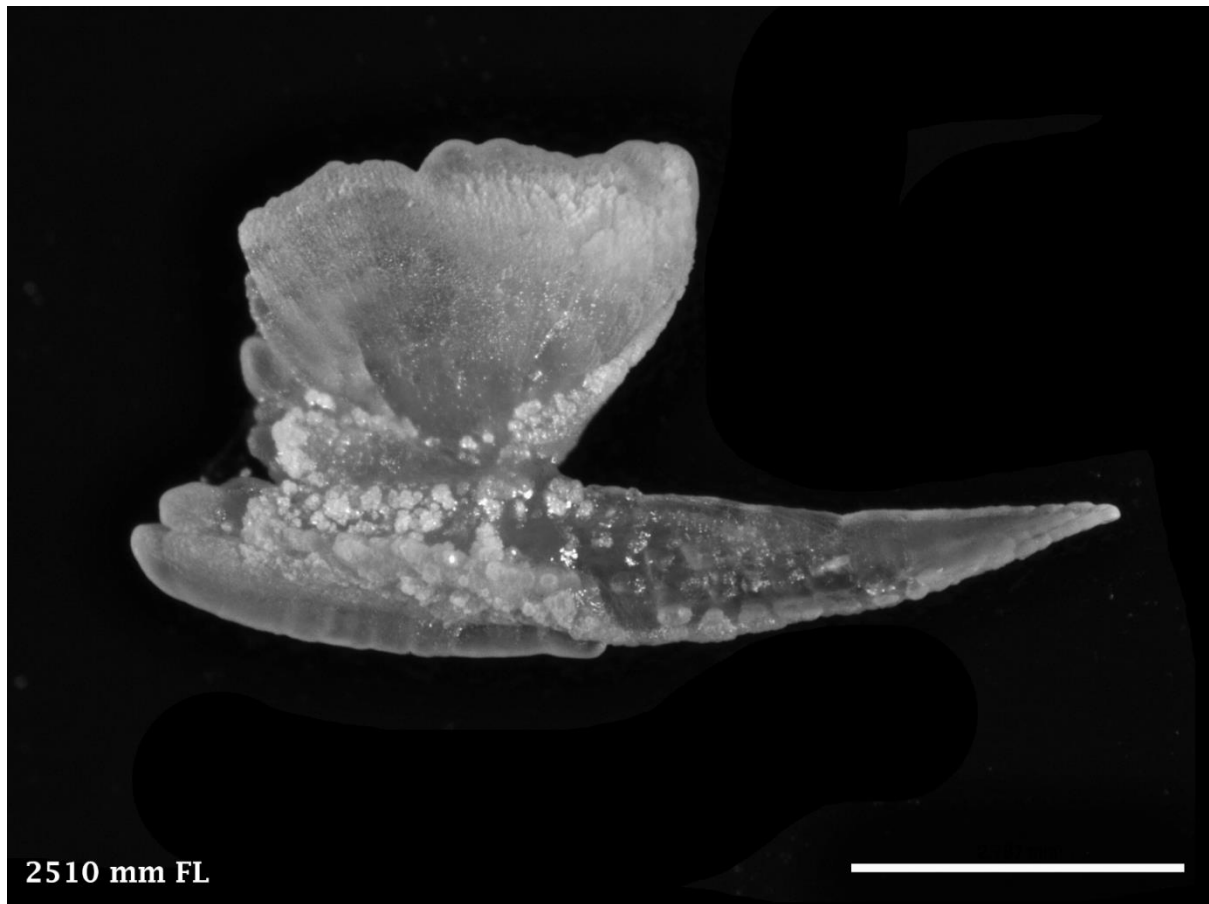


Distribution and Length: Offshore waters from northern WA south around to northern NSW, including Tasmania. 2350 mm TL.

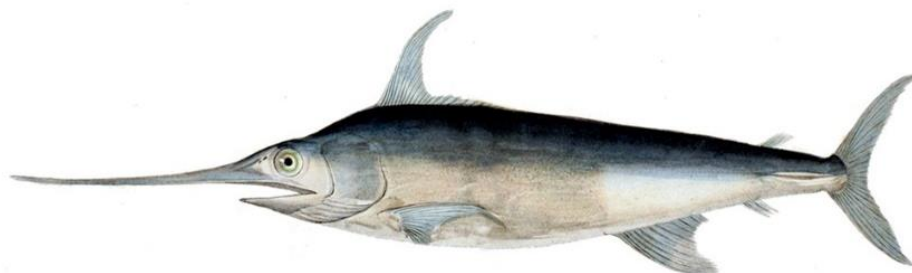


5.232 *Xiphias gladius*, Swordfish

PERCIFORMES XIPHIIDAE (Swordfishes)

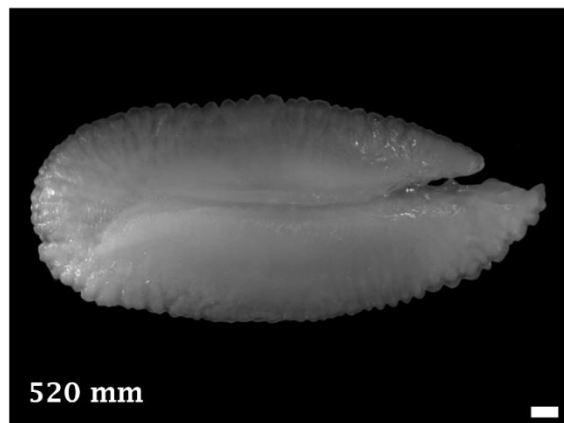
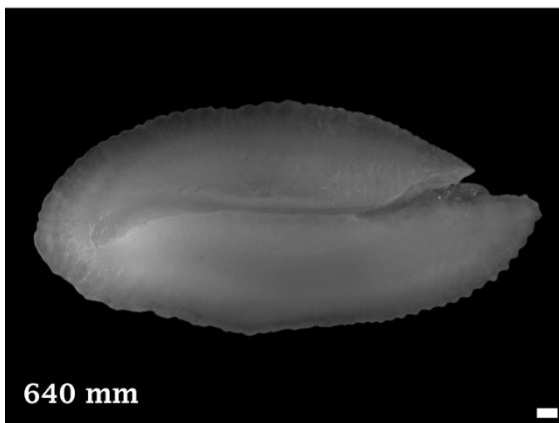
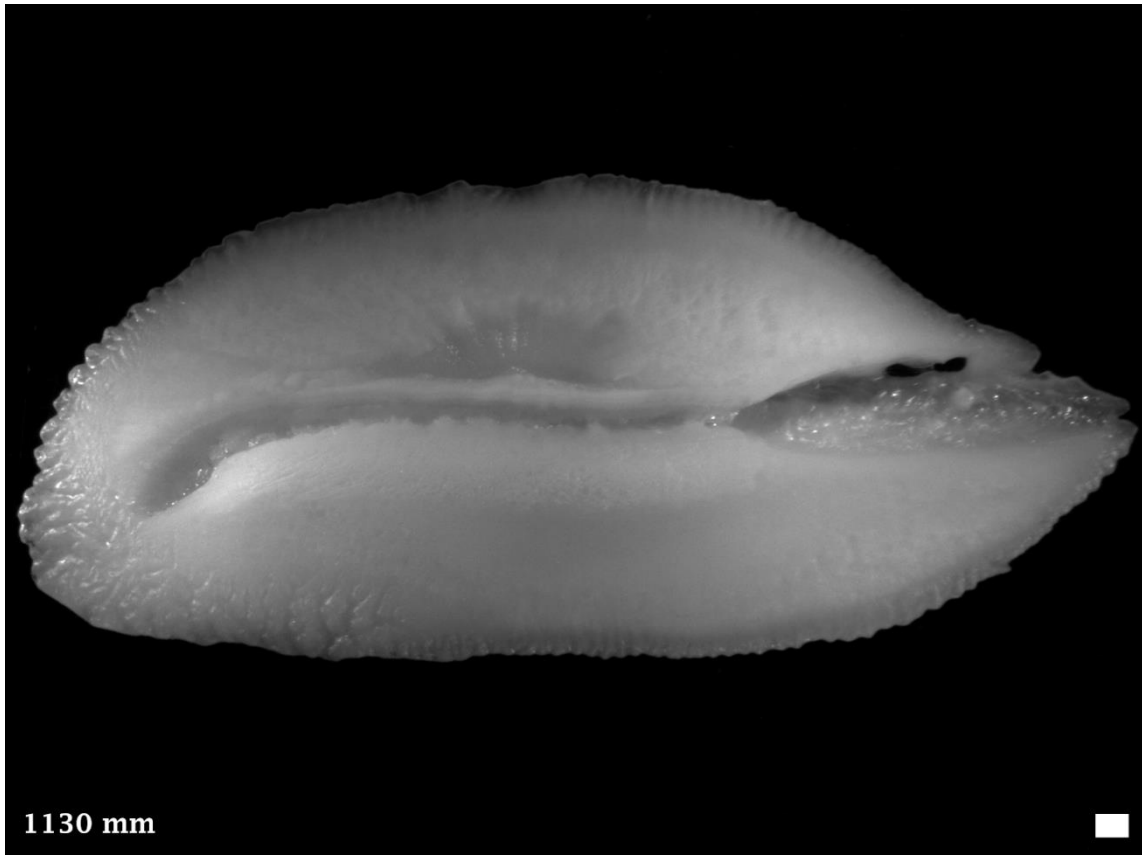


Distribution and Length: Offshore and occasionally inshore waters circum-Australia, including Tasmania. 4900 mm TL.



5.233 *Hyperoglyphe antarctica*, Blue-eye Trevalla

PERCIFORMES CENTROLOPHIDAE (Travallas)

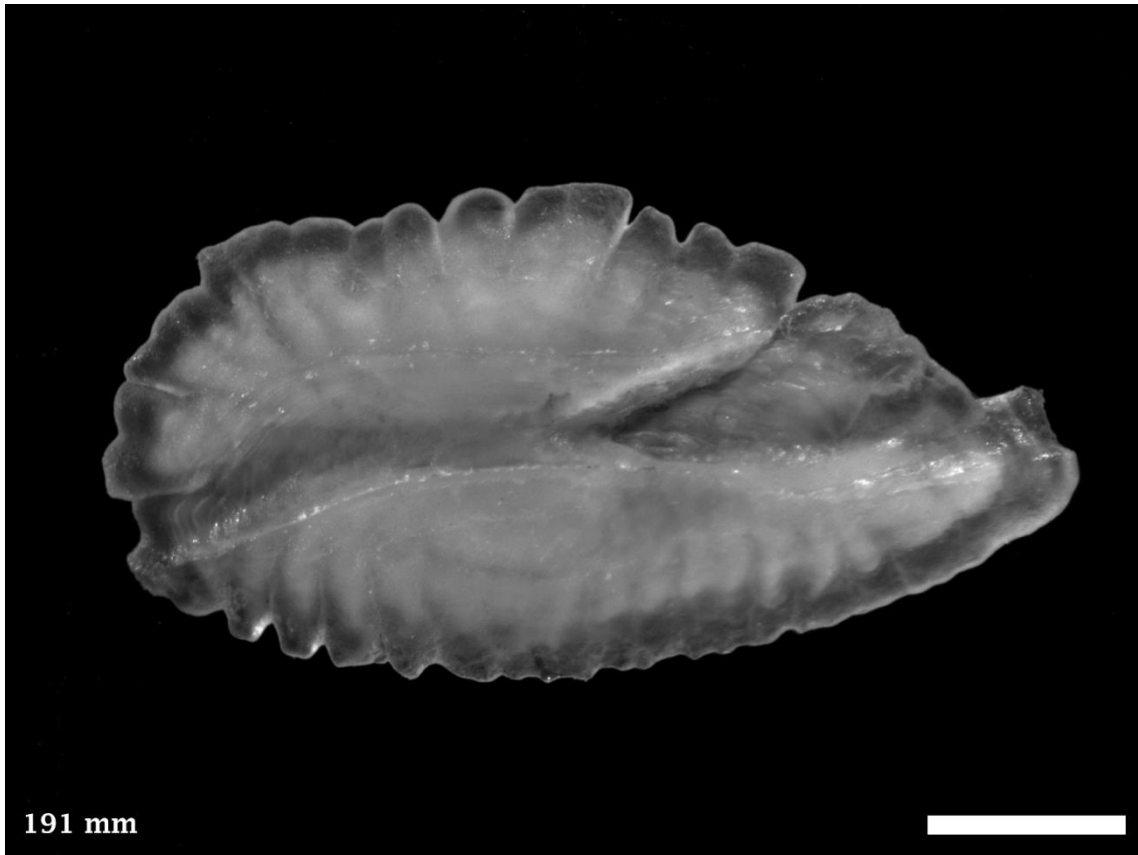


Distribution and Length: Deep offshore waters from Rottnest Island, WA south around to southern Queensland, including Tasmania. 1400 mm TL.

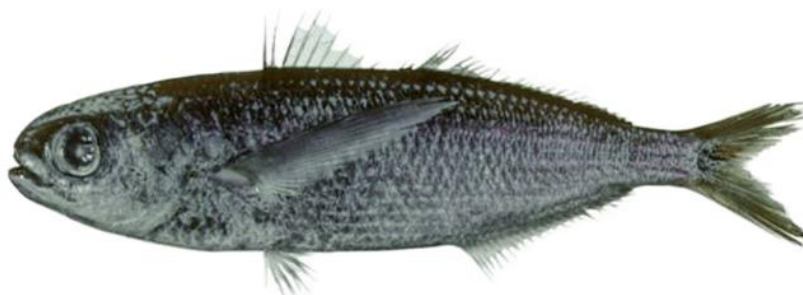


5.234 *Cubiceps caeruleus*, Blue Cubehead

PERCIFORMES NOMEIDAE (Driftfishes)

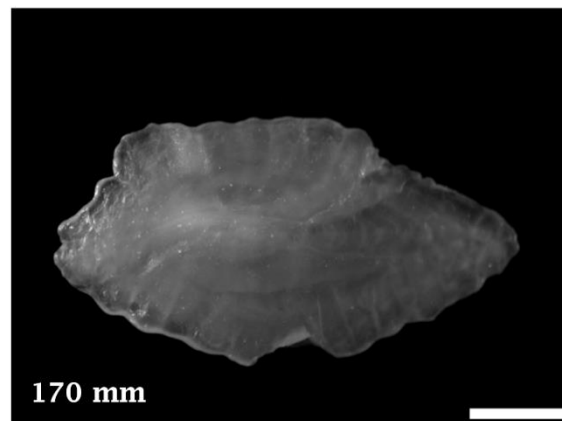
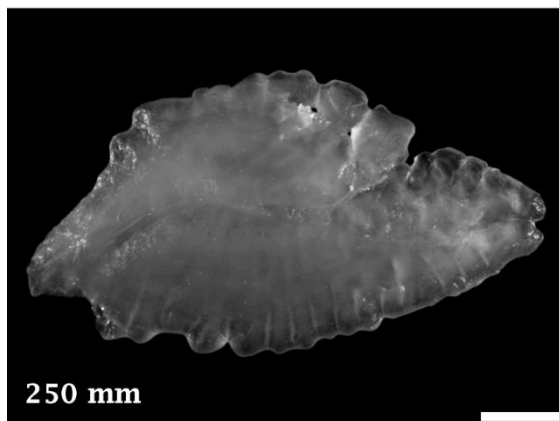
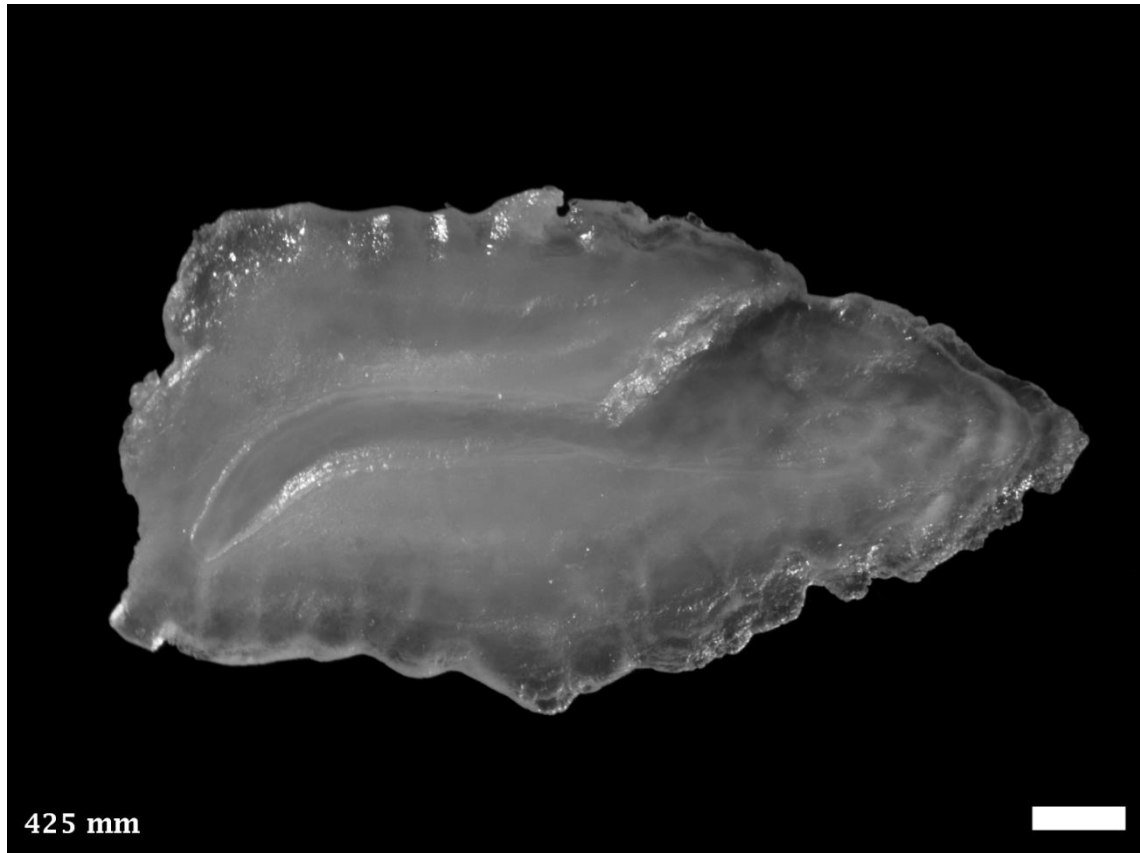


Distribution and Length: Southern offshore waters, predominately at the surface and rarely coming inshore. 200 mm TL.



5.235 *Psettodes erumei*, Australian Halibut

PLEURONECTIFORMES PSETTODIDAE (Halibuts)

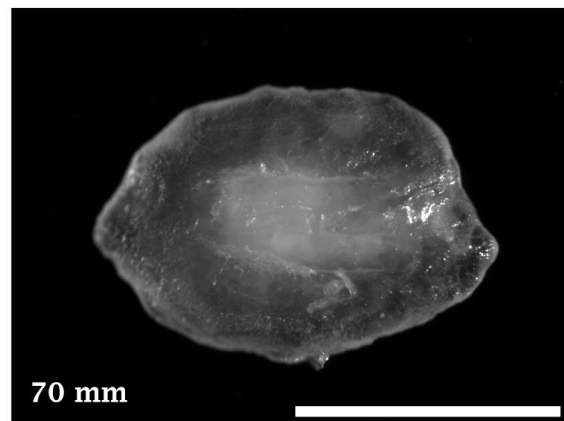
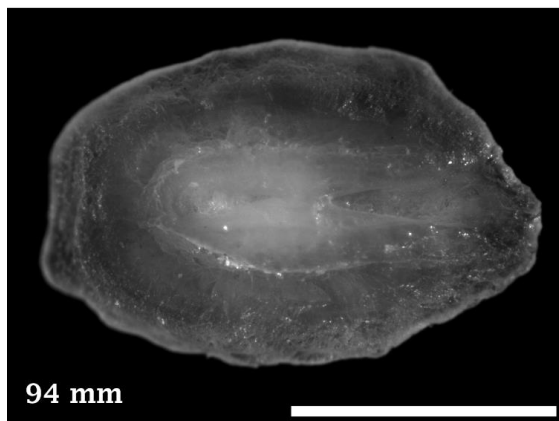
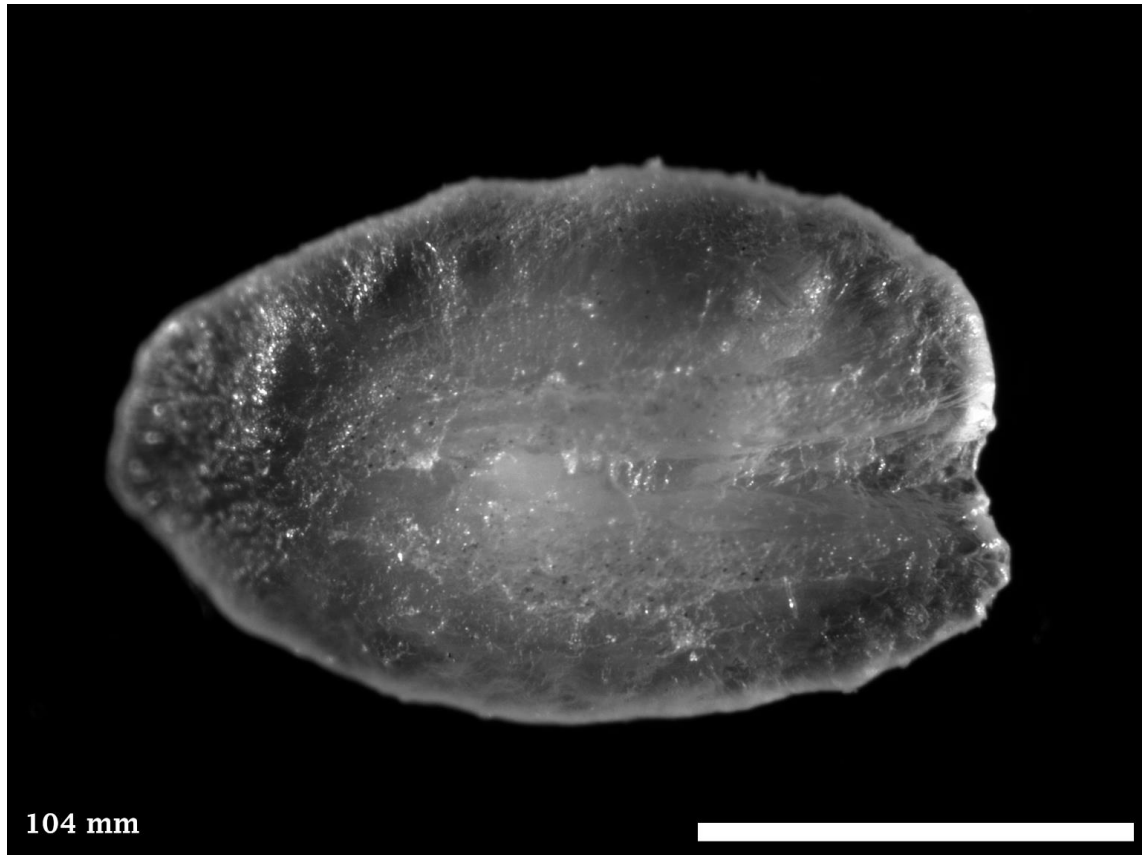


Distribution and Length: Estuarine and coastal waters from Mandurah, WA north around to Queensland. 600 mm TL.



5.236 *Arnoglossus micrommatus*, Smalleye Flounder

PLEURONECTIFORMES BOTHIDAE (Lefteye Flounders)

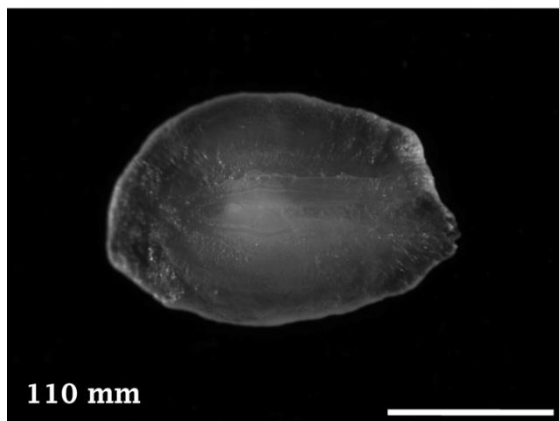
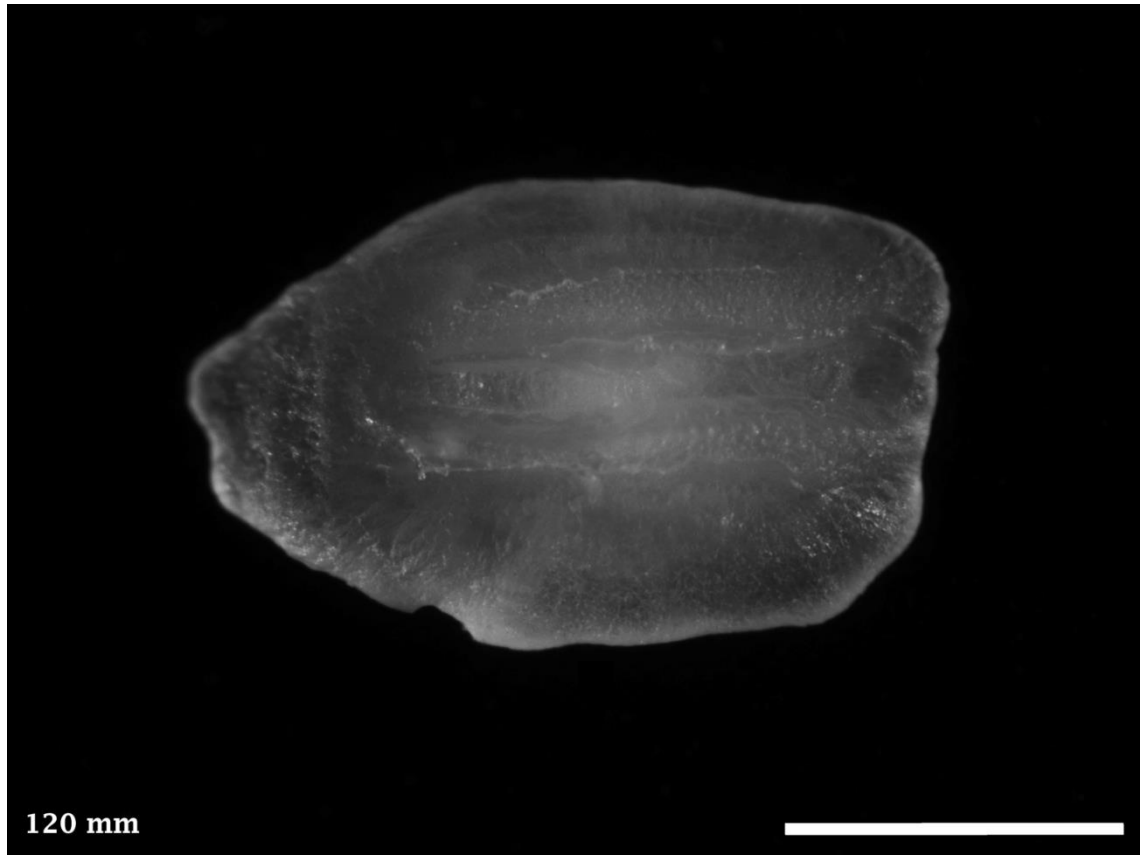


Distribution and Length: Coastal waters from Fremantle, WA south around to Port Lincoln, SA. 170 mm TL.



5.237 *Engyprosopon osculus*, Bumphead Flounder

PLEURONECTIFORMES BOTHIDAE (Lefteye Flounders)

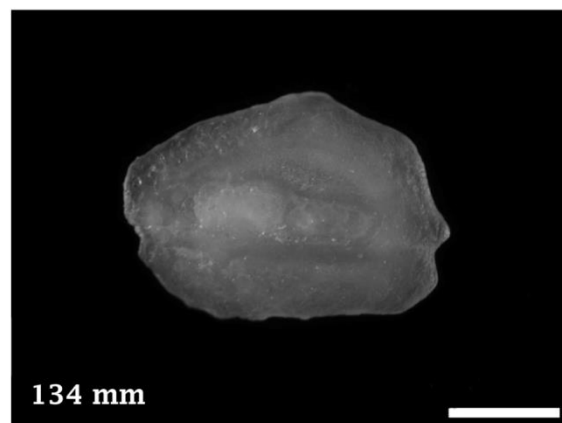
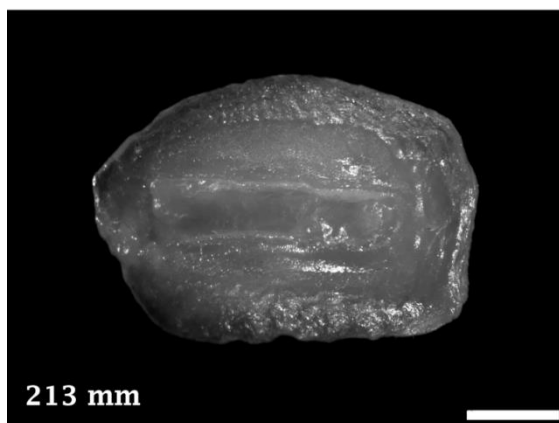
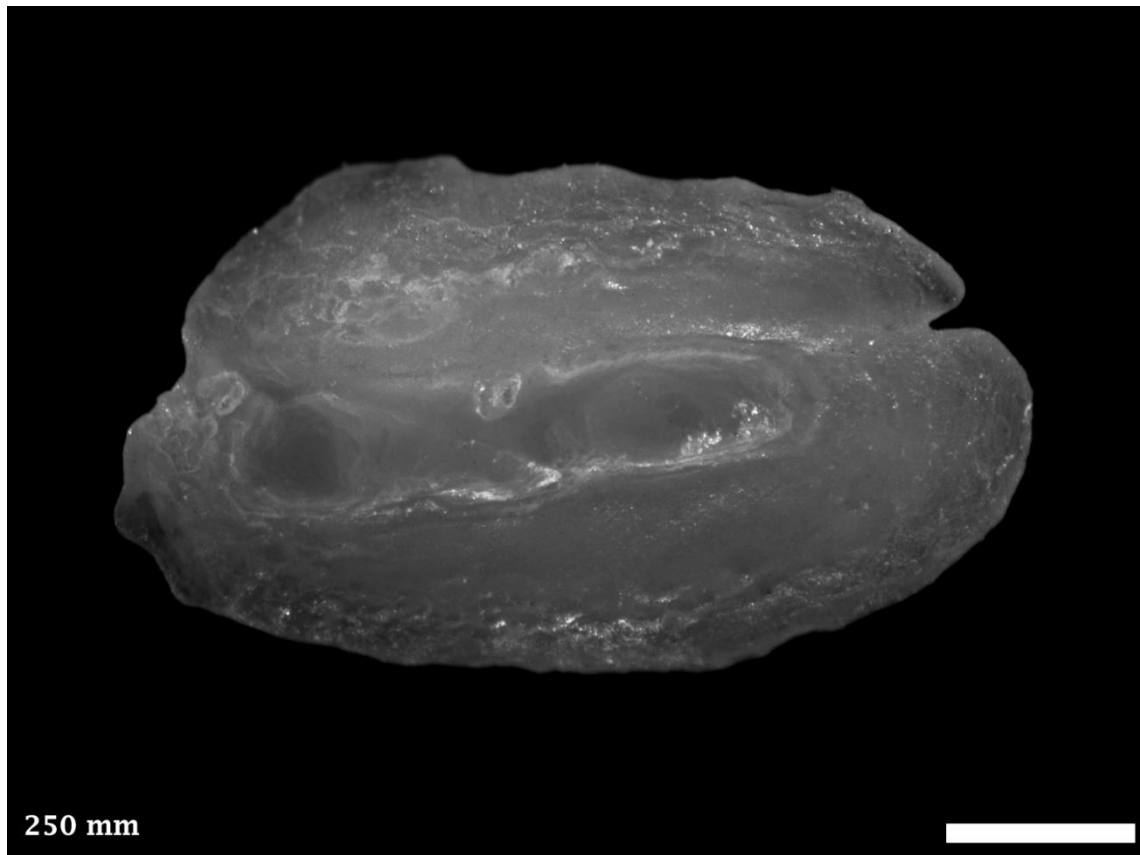


Distribution and Length: Coastal waters from Cockburn Sound, WA north to Northern WA. 150 mm TL.



5.238 *Pseudorhombus arsius*, Largetooth Flounder

PLEURONECTIFORMES PARALICHTHYIDAE (Sand Flounders)

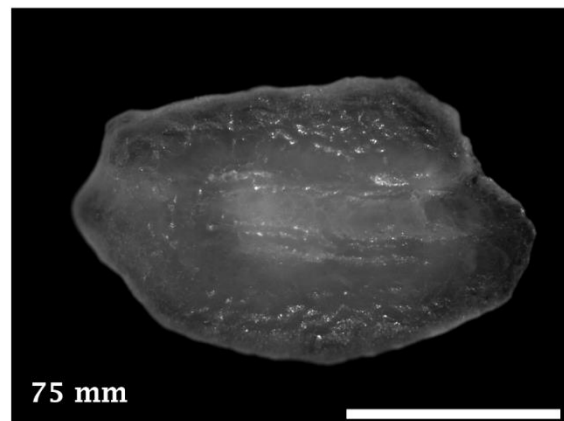
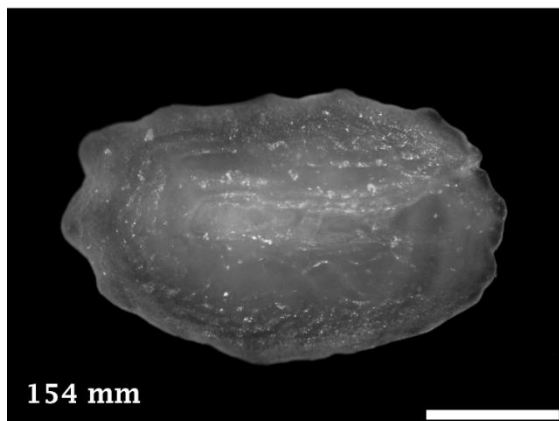
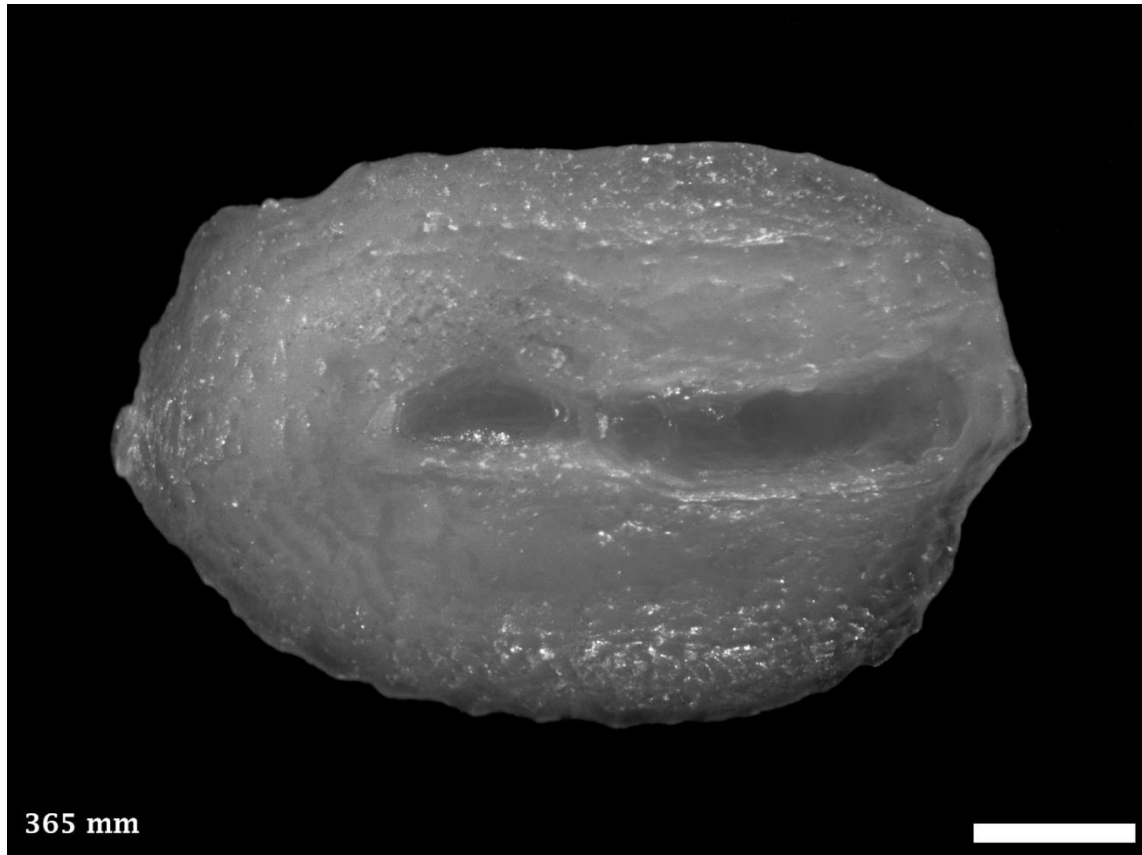


Distribution and Length: Estuarine and coastal waters from South Australia west around to Narooma, NSW. Note: Right otoliths. 530 mm TL.

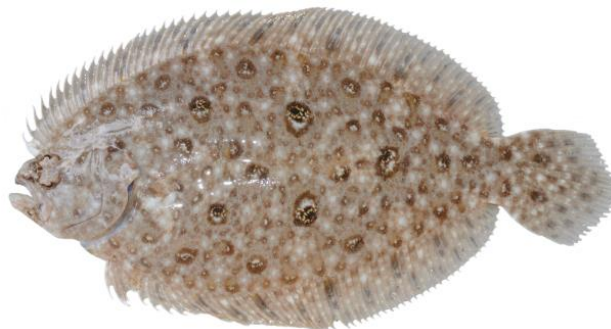


5.239 *Pseudorhombus jenynsii*, Smalltooth Flounder

PLEURONECTIFORMES PARALICHTHYIDAE (Sand Flounders)

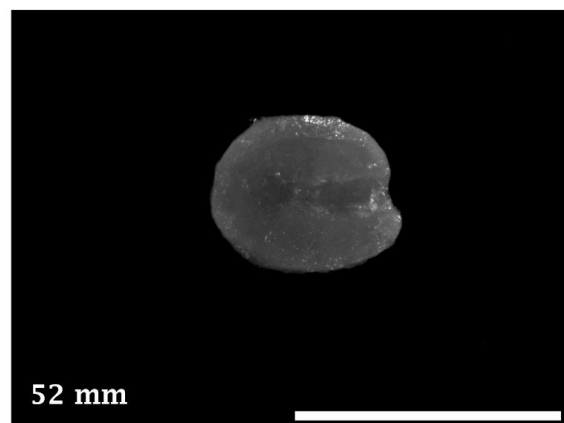
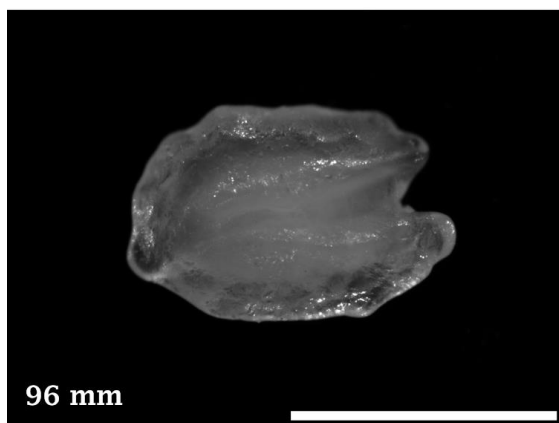
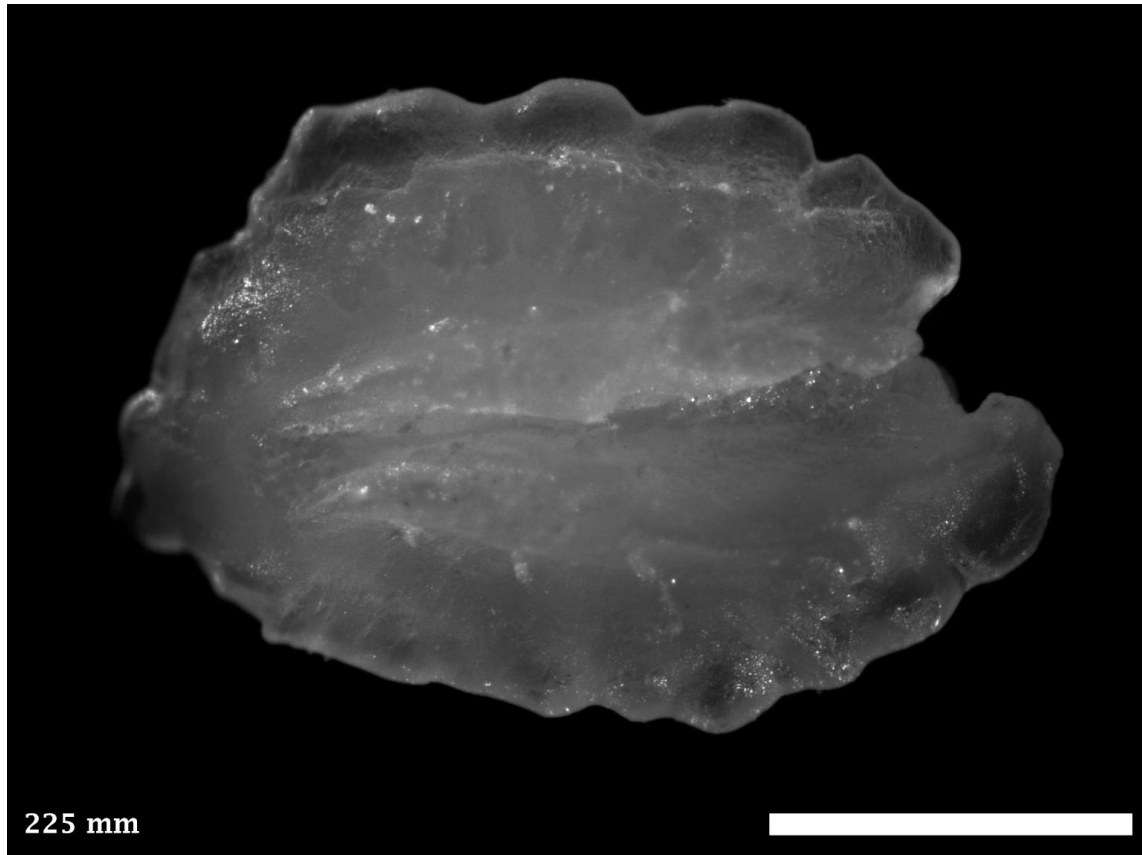


Distribution and Length: Estuarine and coastal waters Cirum-Australia, except Tasmania. 550 mm TL.



5.240 *Ammotretis elongatus*, Elongate Flounder

PLEURONECTIFORMES PLEURONECTIDAE (Righteye Flounders)

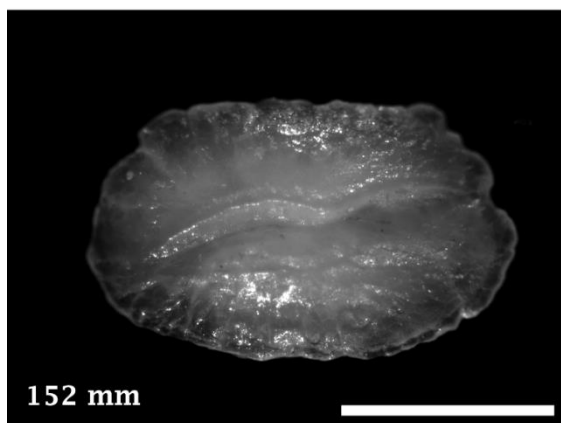
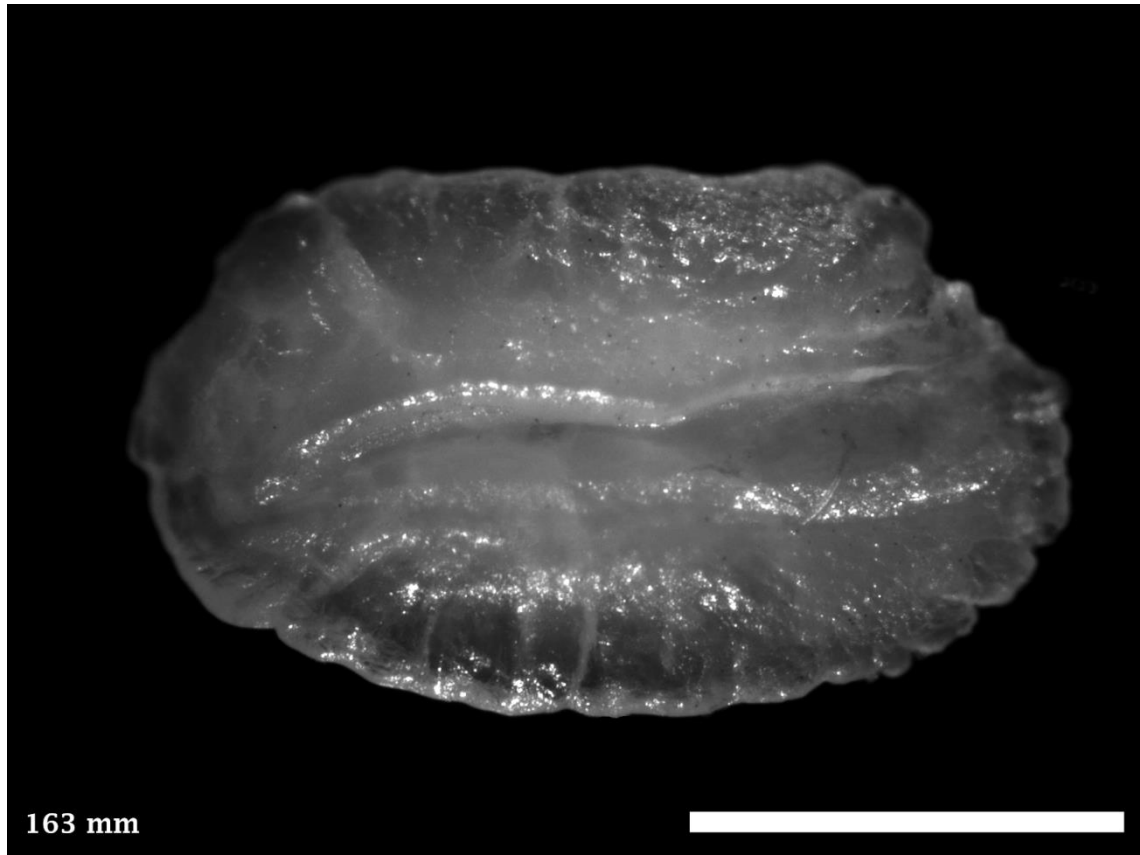


Distribution and Length: Estuarine and coastal waters from Geraldton, WA south around to Victoria, including Tasmania. 220 mm TL.

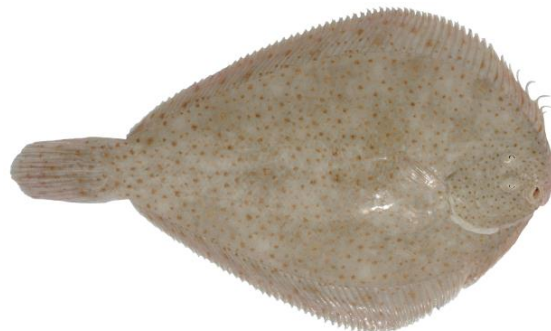


5.241 *Ammotretis lituratus*, Spotted Flounder

PLEURONECTIFORMES PLEURONECTIDAE (Righteye Flounders)

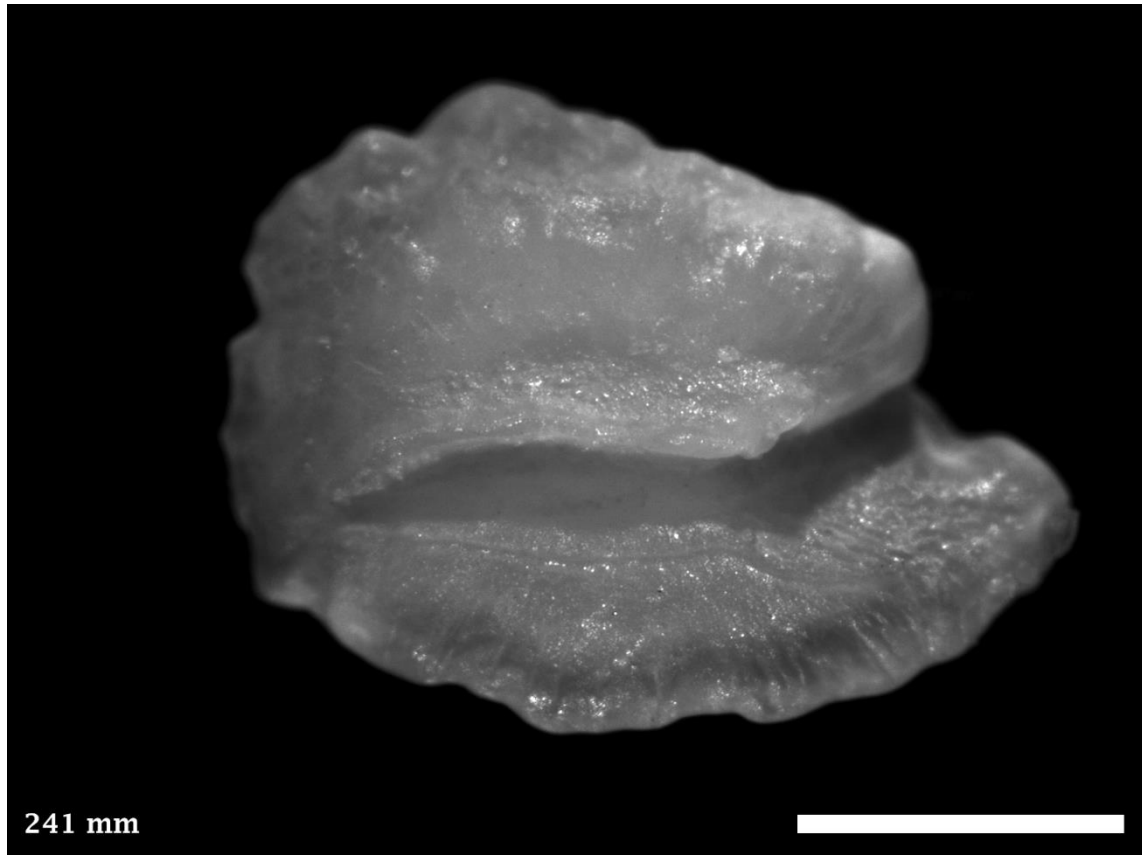


Distribution and Length: Coastal and offshore waters from Recherche Archipelago east to Victoria, including Tasmania. 240 mm TL.



5.242 *Ammotretis rostratus*, Longsnout Flounder

PLEURONECTIFORMES PLEURONECTIDAE (Righteye Flounders)

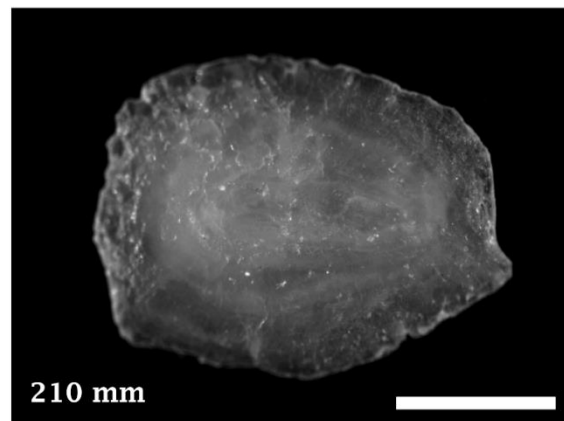
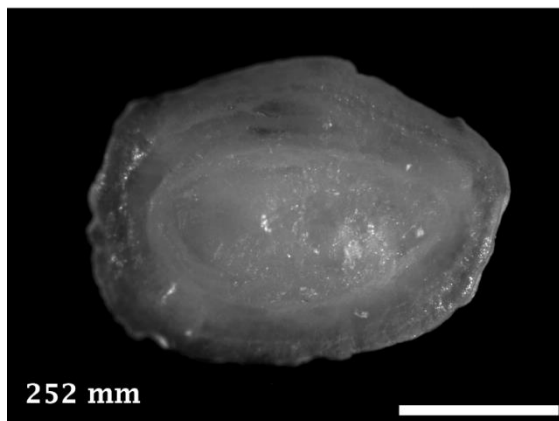
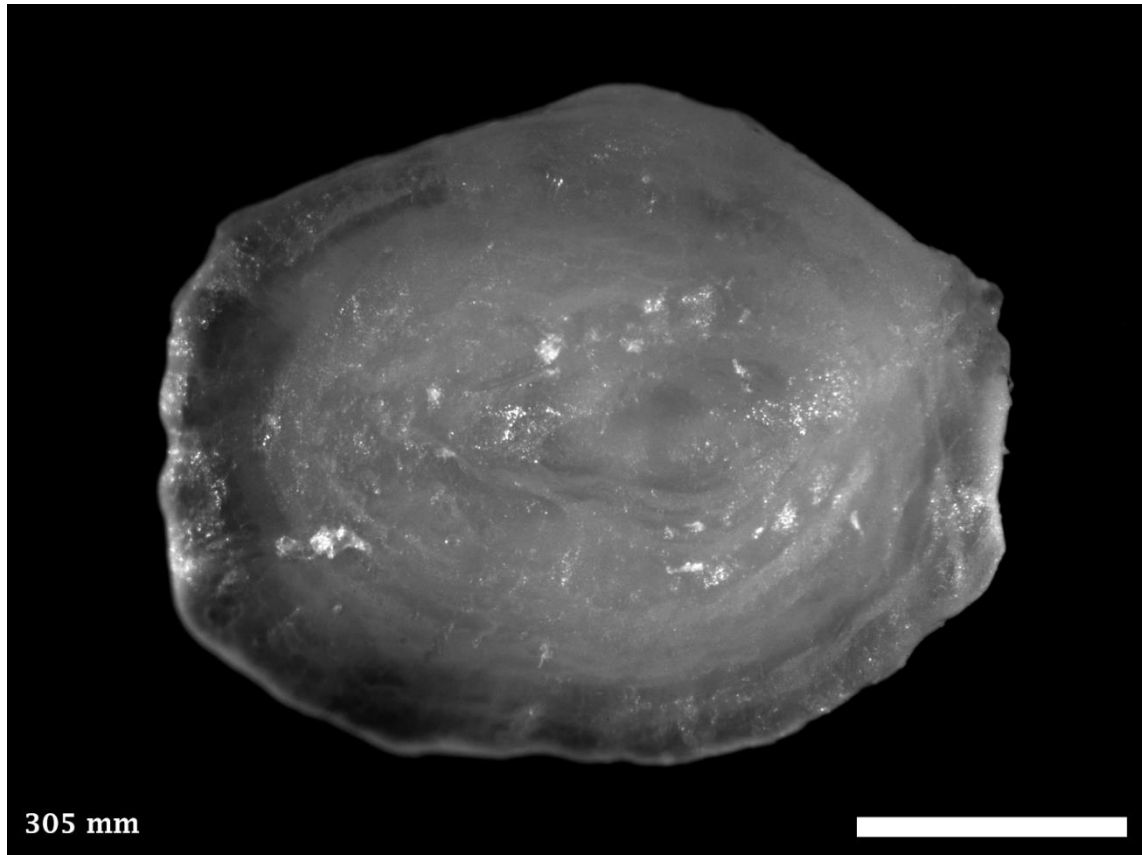


Distribution and Length: Estuarine, coastal and offshore waters from Augusta, WA east to Sydney, NSW, including Tasmania. 340 mm TL.



5.243 *Zebrias cancellatus*, Harrowed Sole

PLEURONECTIFORMES SOLEIDAE (Soles)

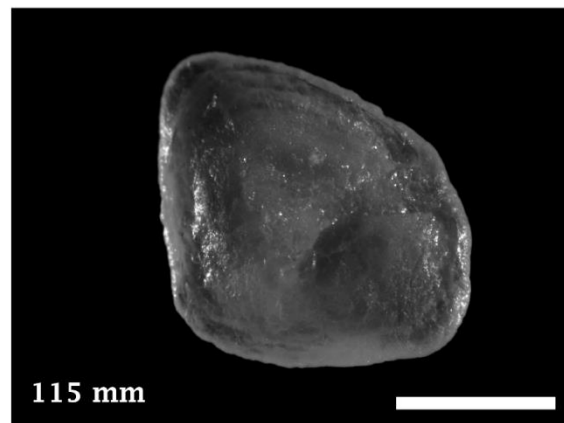
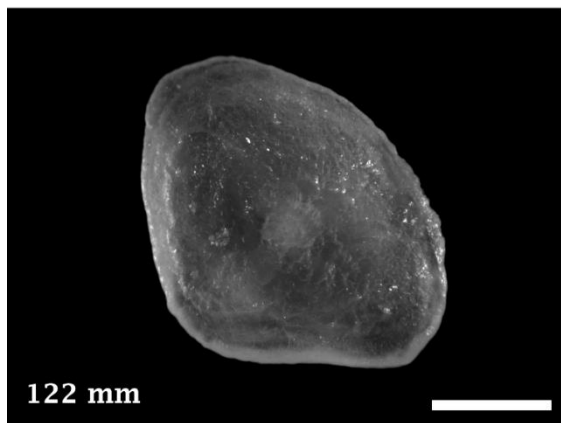
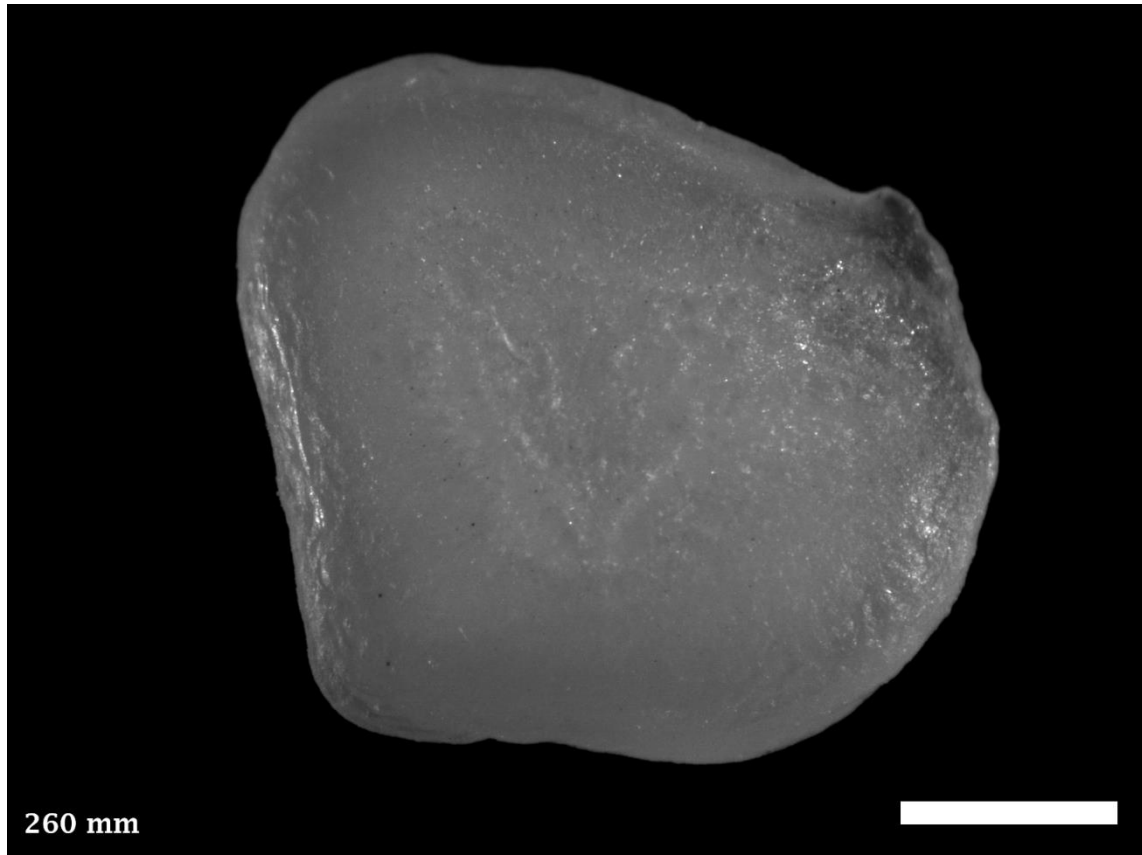


Distribution and Length: Coastal waters from the North West Shelf, WA south around to the Great Australian Bight, WA. 270 mm TL.



5.244 *Cynoglossus broadhursti*, Southern Tongue Sole

PLEURONECTIFORMES CYNOGLOSSIDAE (Tongue Soles)

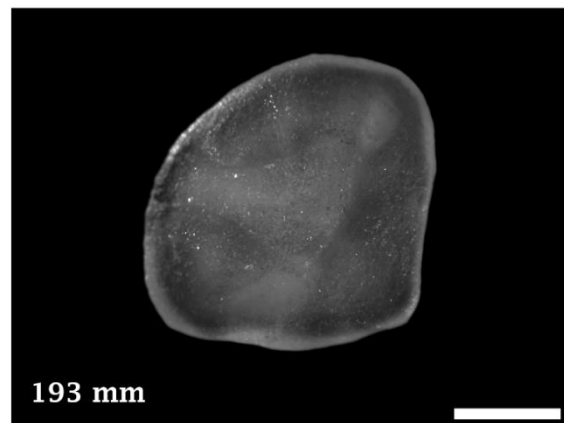
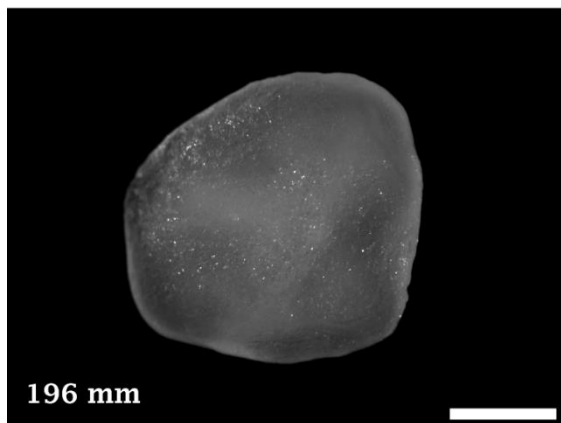
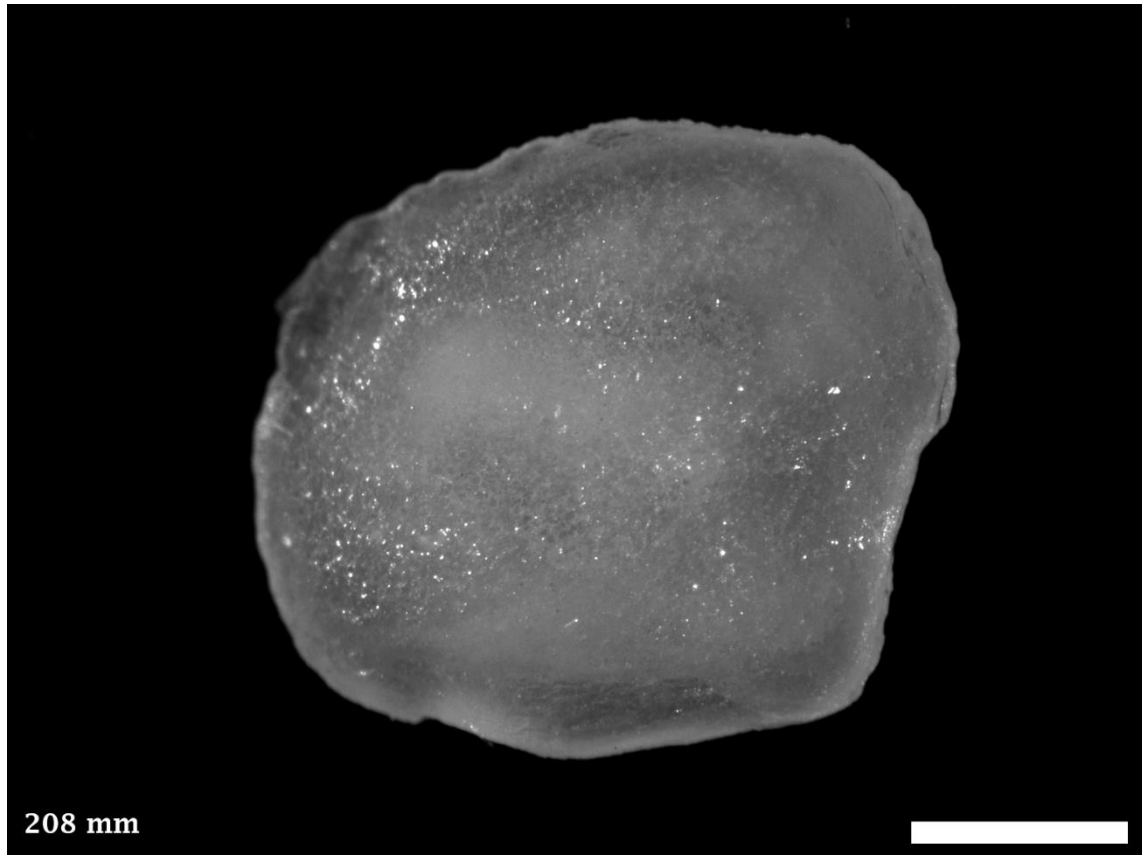


Distribution and Length: Coastal waters from Carnarvon, WA south around to Spencer Gulf, SA. Note: Right otoliths. 310 mm TL.



5.245 *Cynoglossus maculipinnis*, Spotfin Tounge Sole

PLEURONECTIFORMES CYNOGLOSSIDAE (Tongue Soles)

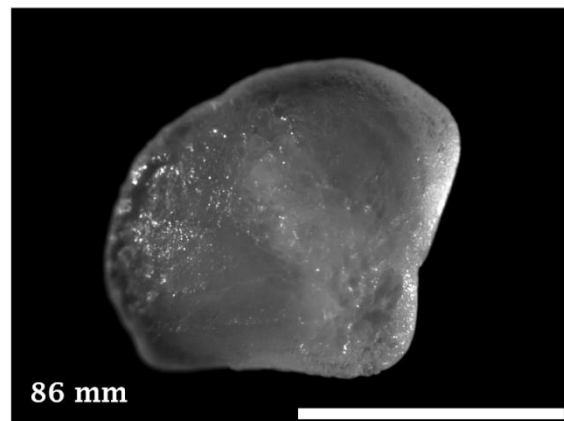
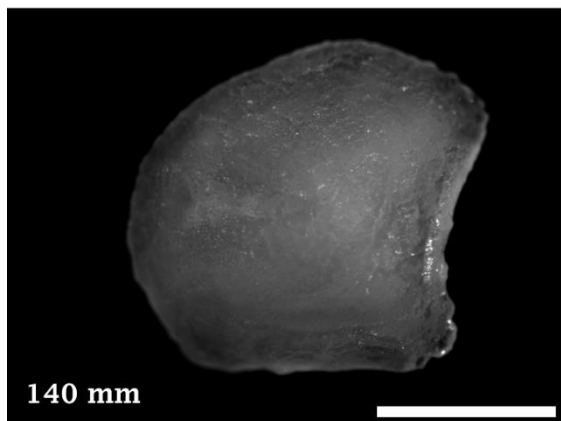
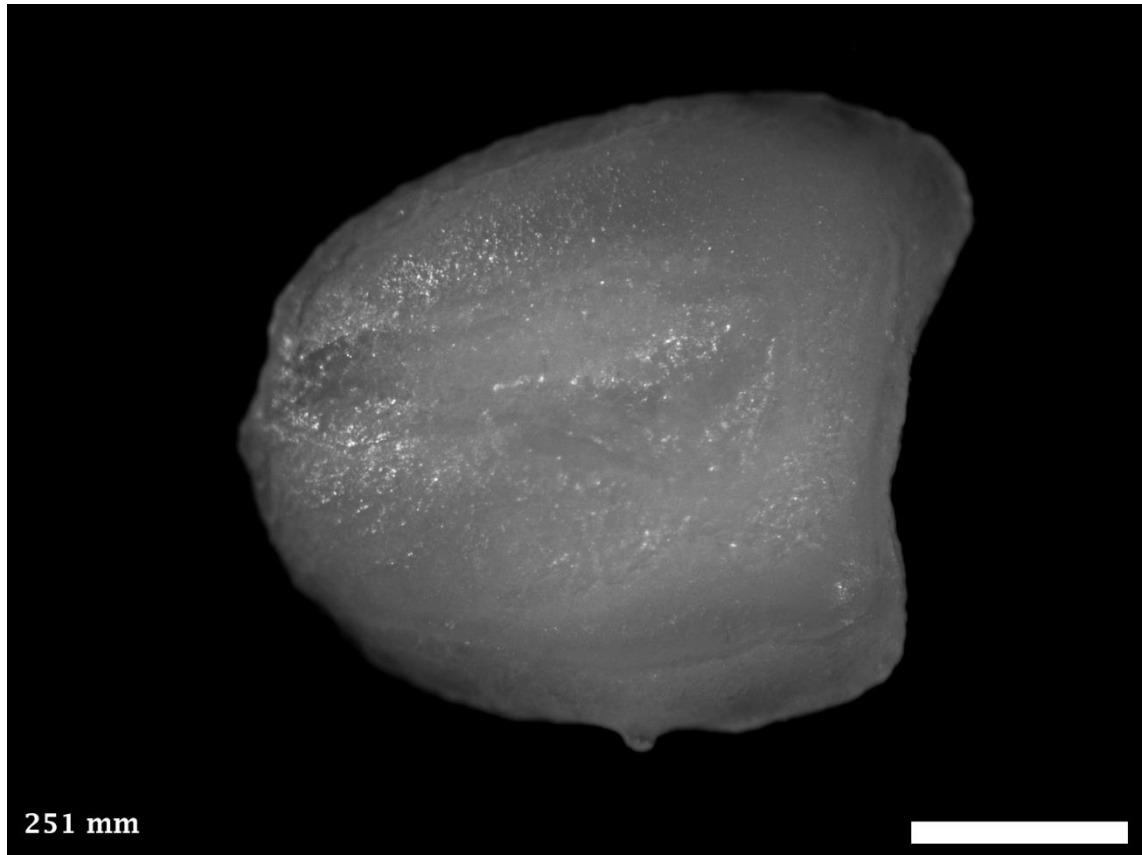


Distribution and Length: Coastal waters from Fremantle, WA north around to northern NSW. Note: Right otoliths. 208 mm TL.



5.246 *Paraplagusia bilineata*, Lemon Tongue Sole

PLEURONECTIFORMES CYNOGLOSSIDAE (Tongue Soles)

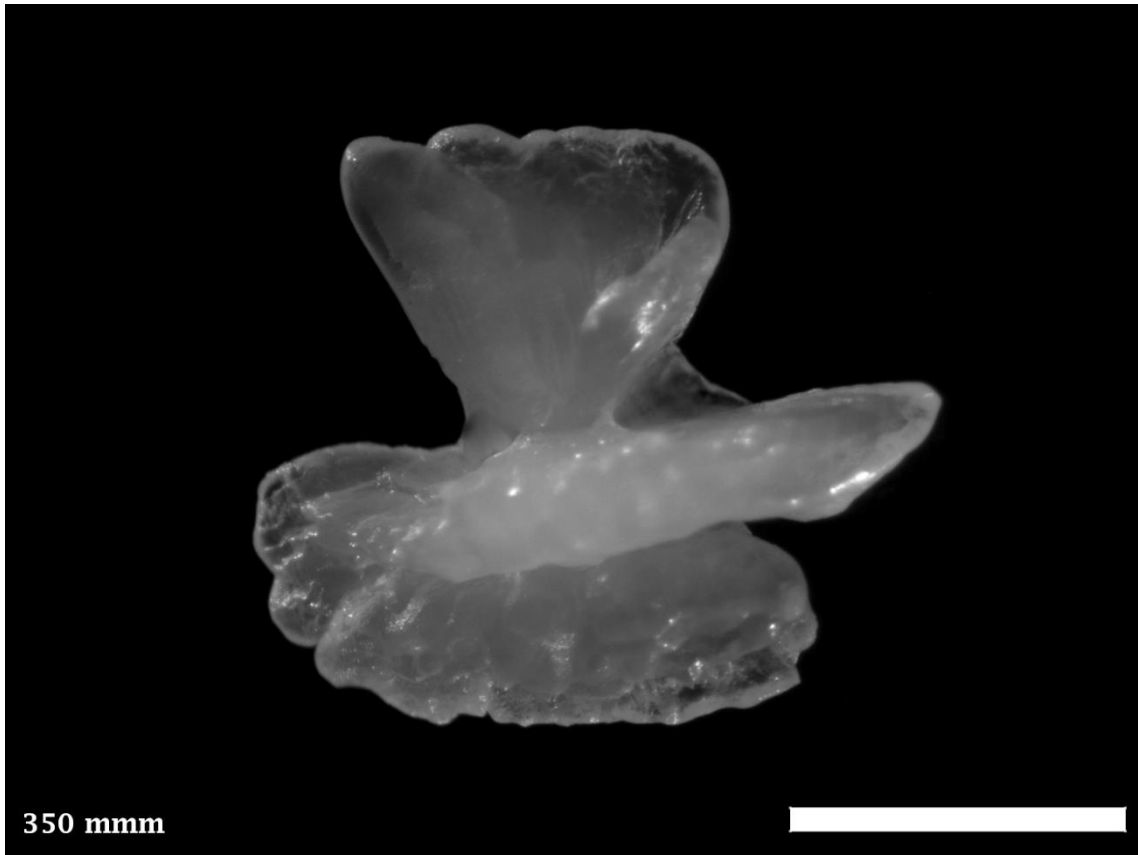


Distribution and Length: Coastal waters from Bunbury, WA north around to Sydney, NSW. 330 mm TL.



5.247 *Acanthaluteres brownii*, Spinytail Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

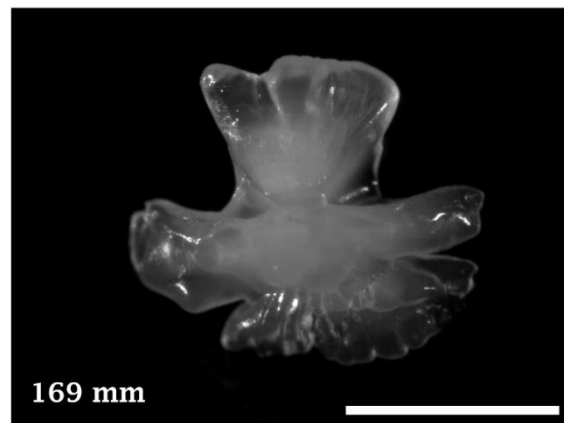
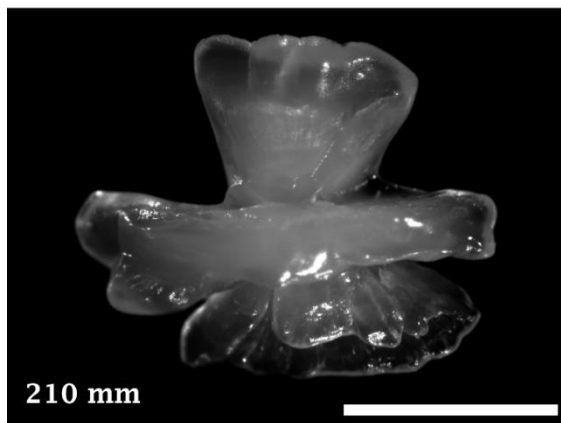
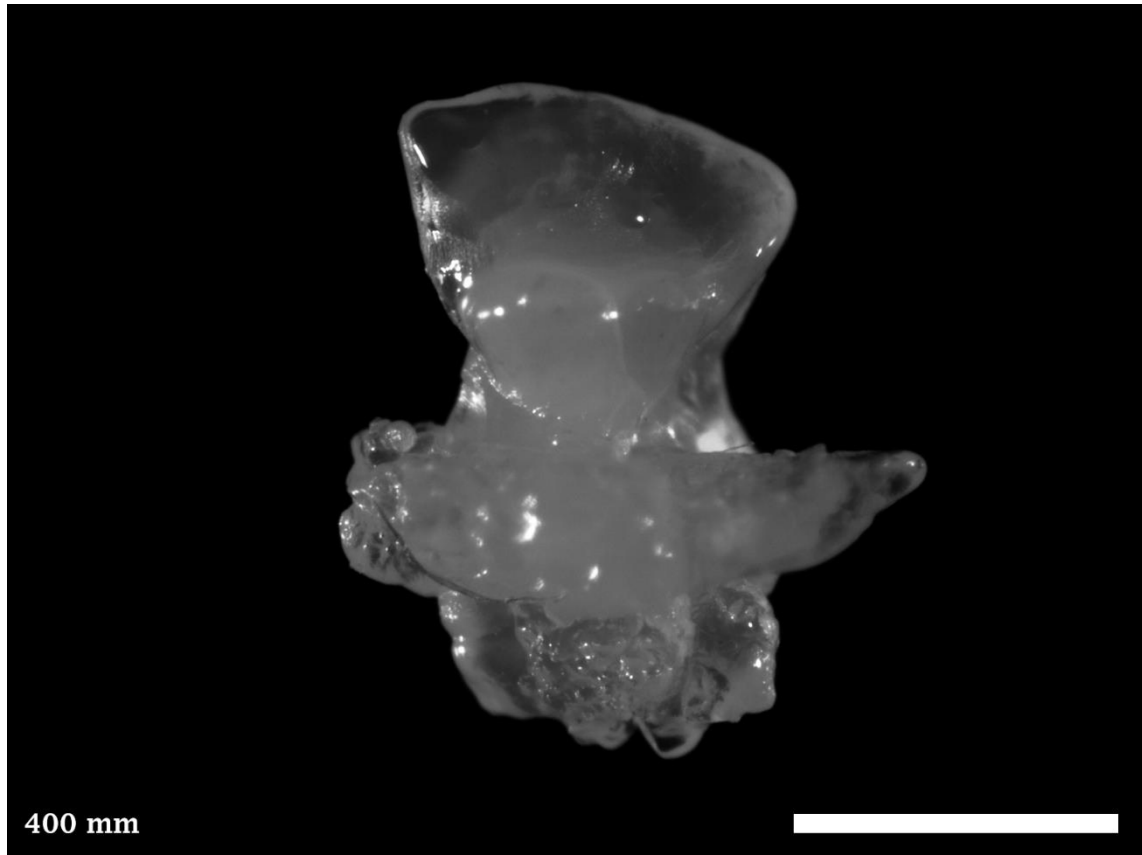


Distribution and Length: Coastal waters from Rottnest Island, WA south around to Kangaroo Island, SA. 460 mm TL.



5.248 *Acanthaluteres vittiger*, Toothbrush Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

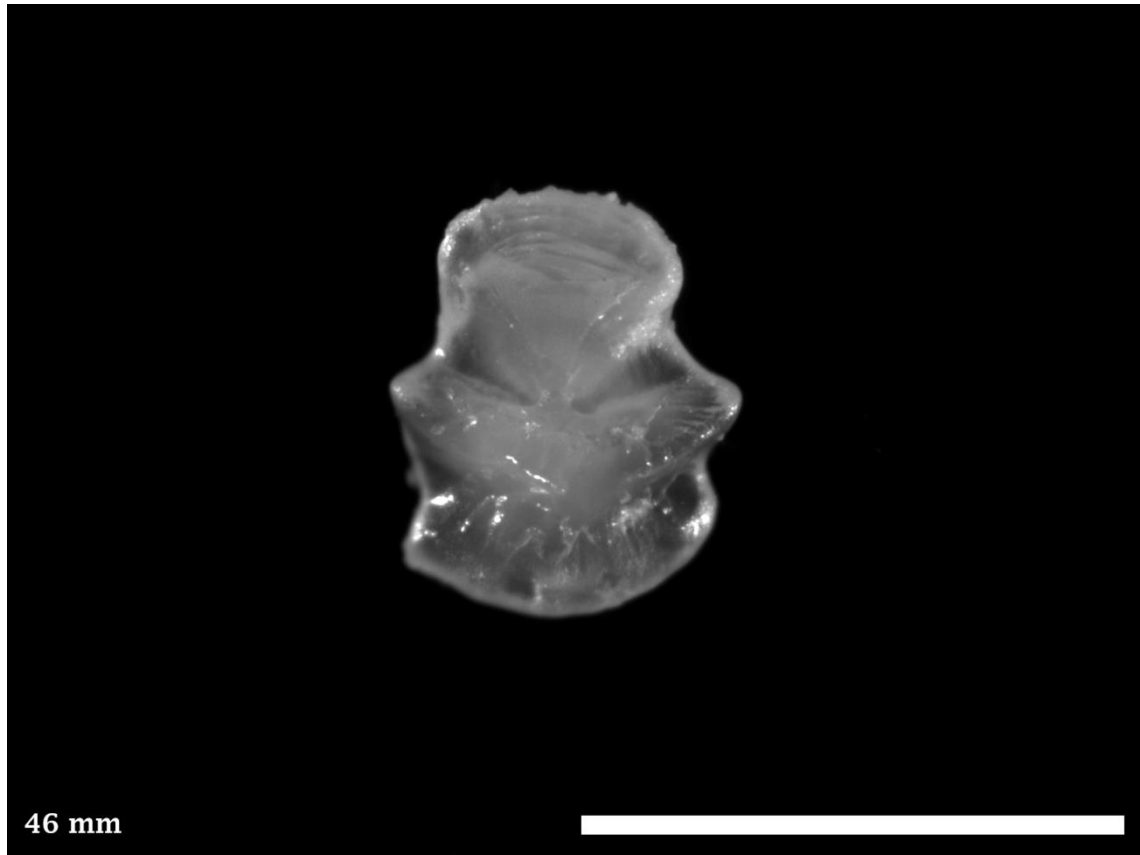


Distribution and Length: Coastal waters from Jurien Bay, WA south around to Coffs Harbour, NSW, including Tasmania. 400 mm TL.



5.249 *Brachaluteres jacksonianus*, Southern Pygmy Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

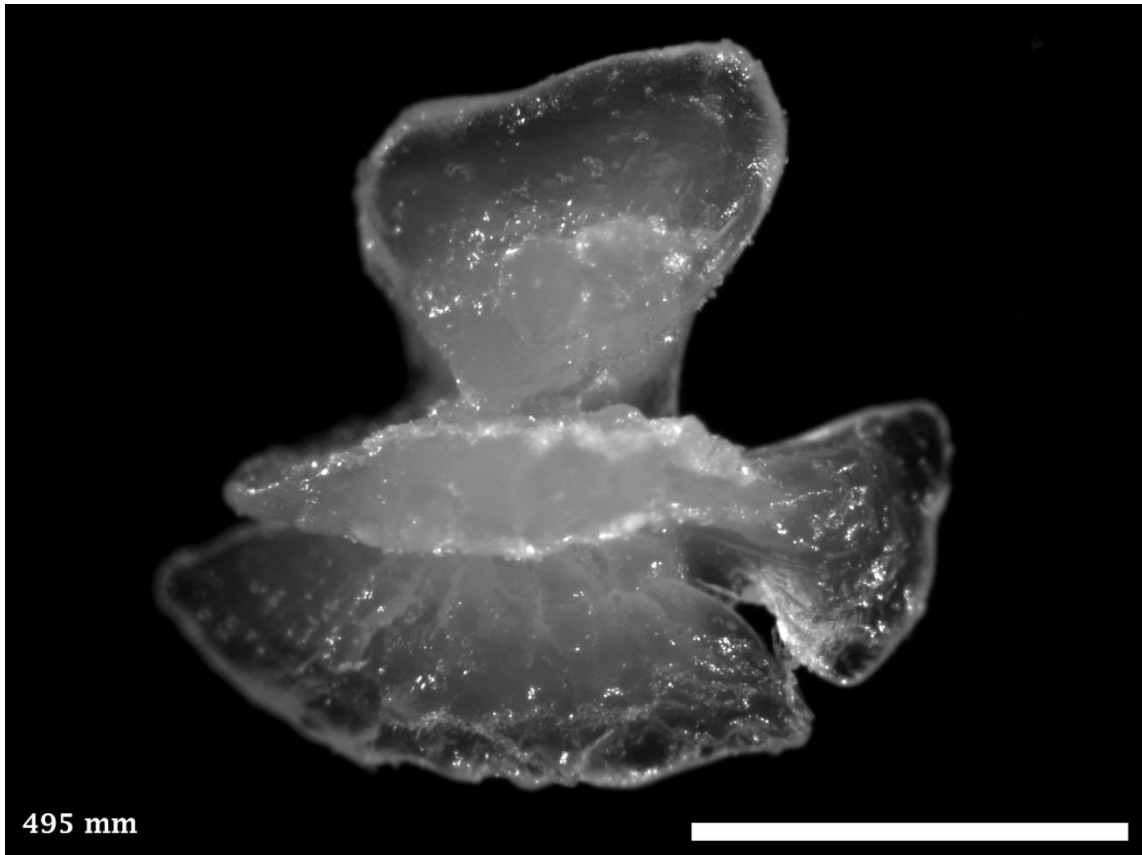


Distribution and Length: Estuaries and coastal waters from Lancelin, WA south around to Morton Bay, Qld, including Tasmania. 90 mm TL.

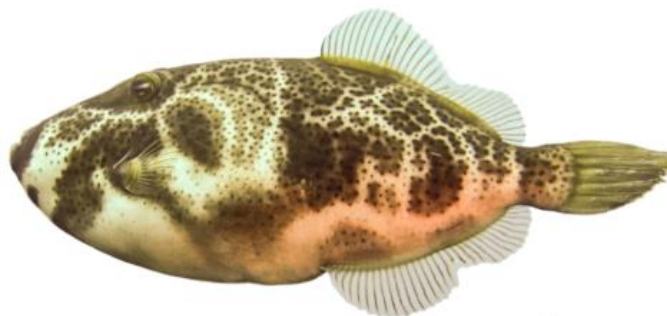


5.250 *Eubalichthys cyanoura*, Bluetail Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

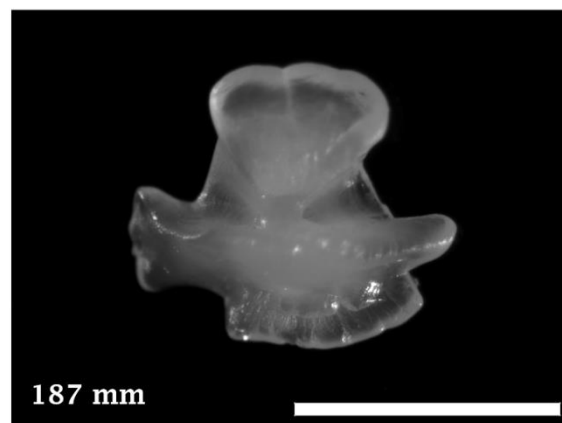
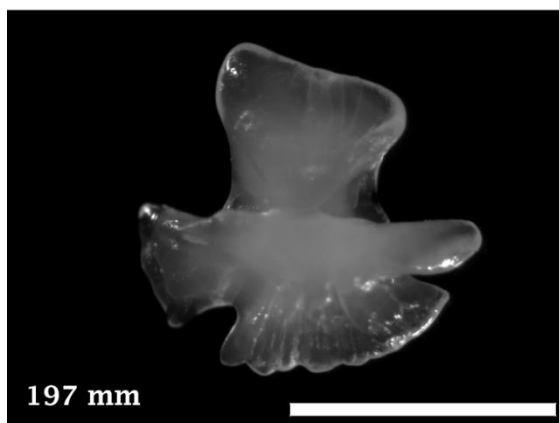
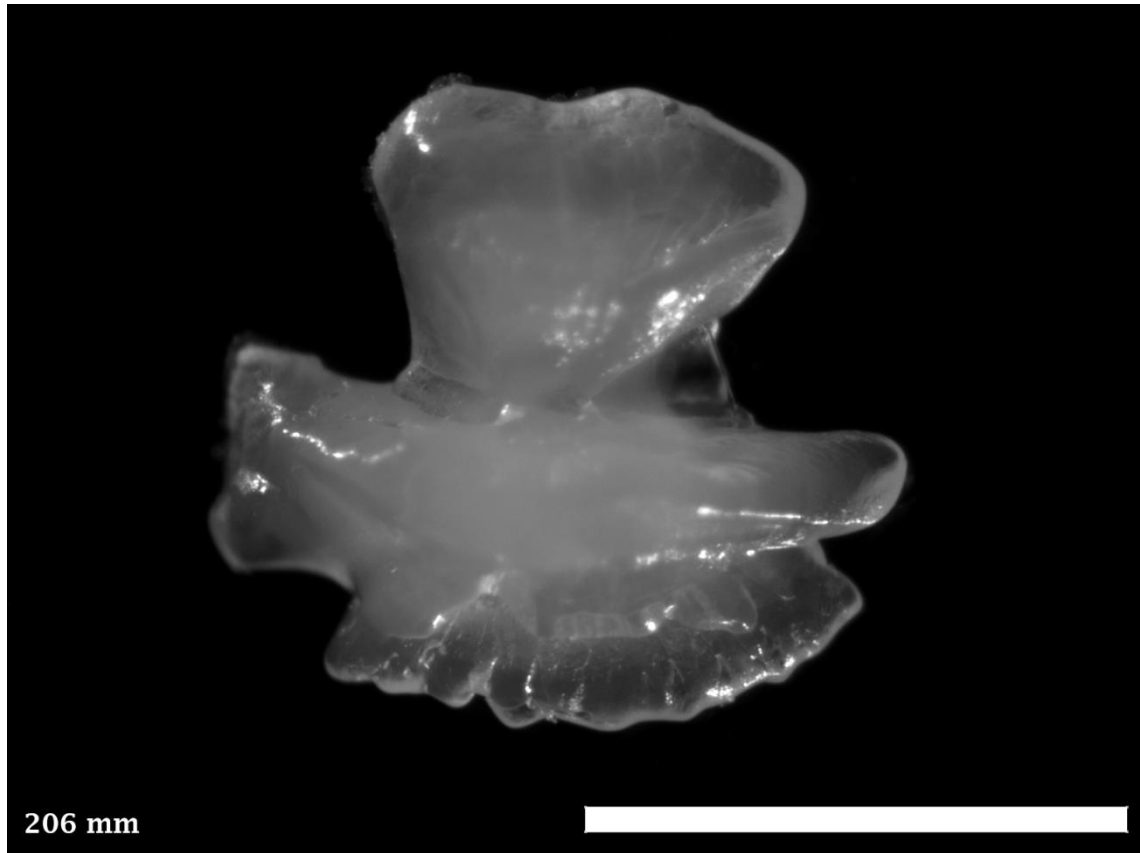


Distribution and Length: Coastal reefs from Dongara, WA south around to York Peninsula, SA. 500 mm TL.



5.251 *Eubalichthys mosaicus*, Mosaic Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

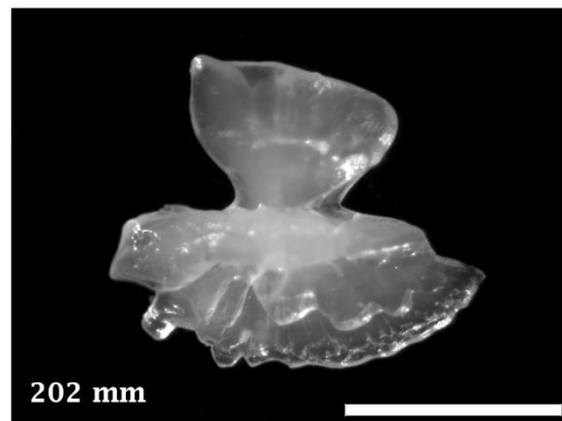
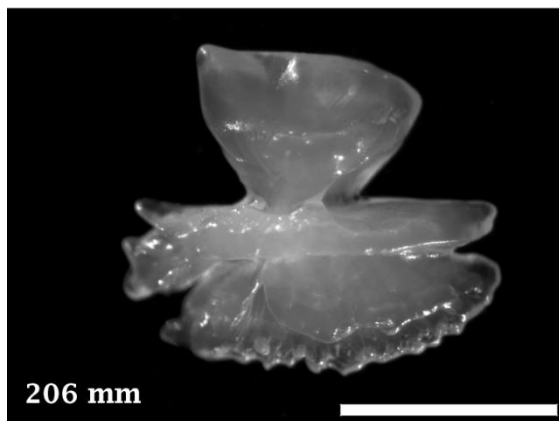
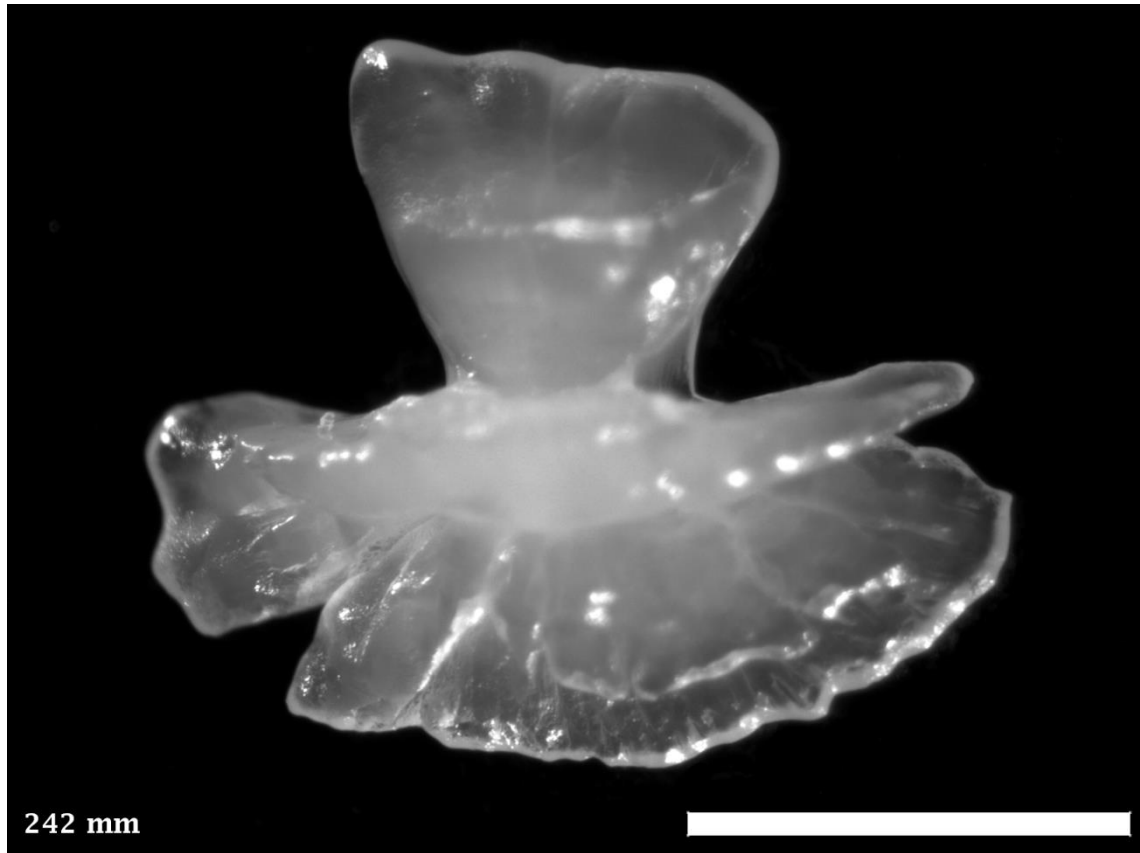


Distribution and Length: Coastal reefs from Dongara, WA south around to Noosa Head, Qld; including Tasmania. 600 mm TL.



5.252 *Meuschenia flavolineata*, Yellowstriped Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

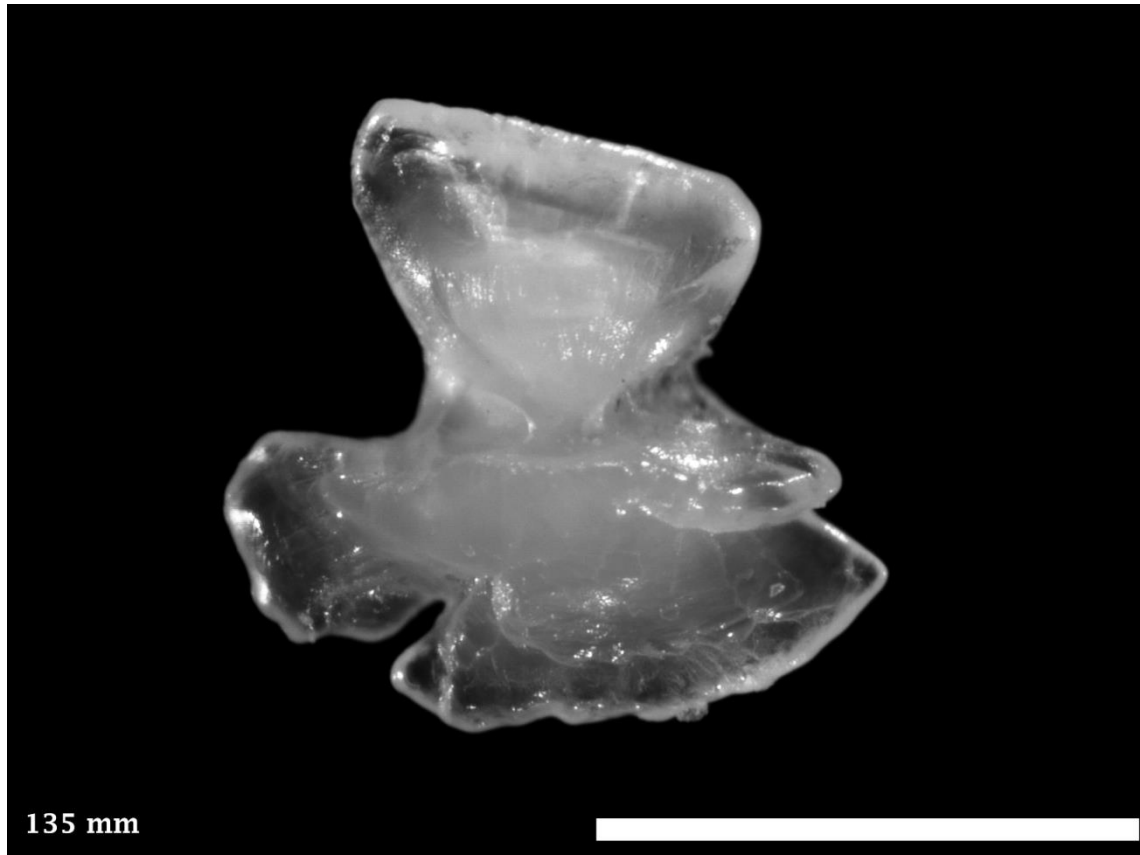


Distribution and Length: Coastal waters from Dongara, WA south around to Broughton Island, NSW, including Tasmania. 300 mm TL.



5.253 *Meuschenia freycineti*, Sixspine Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

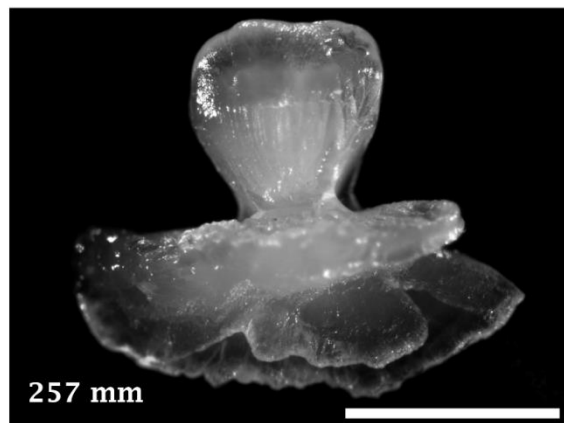
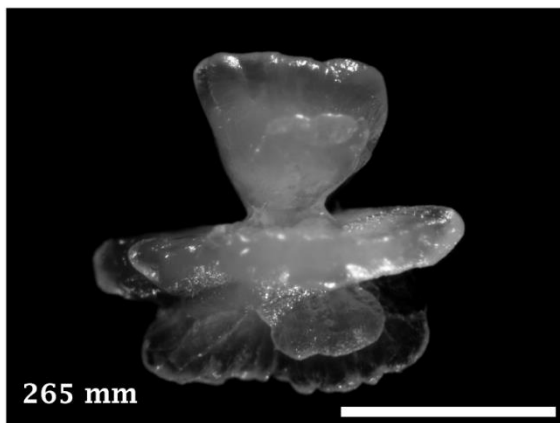
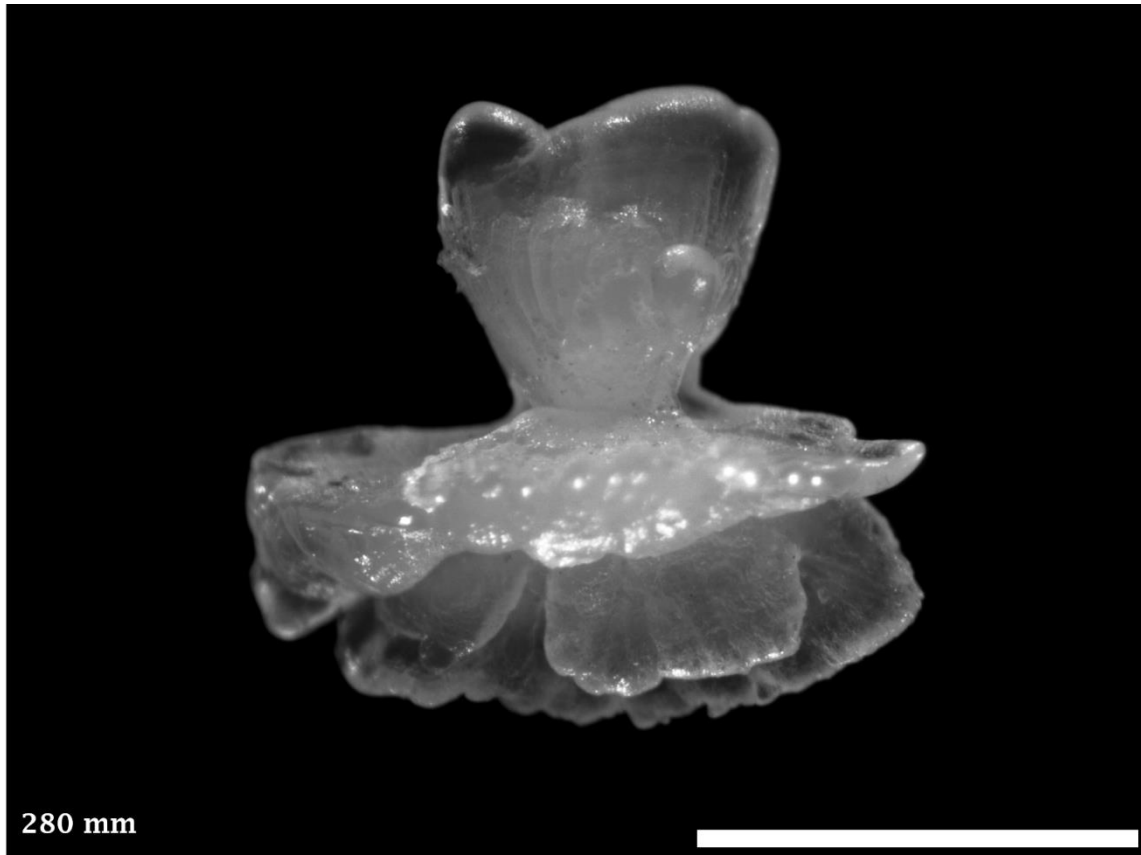


Distribution and Length: Coastal waters from Jurien Bay, WA south around to Broughton Island, NSW, including Tasmania. 550 mm TL.



5.254 *Meuschenia galii*, Bluelined Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

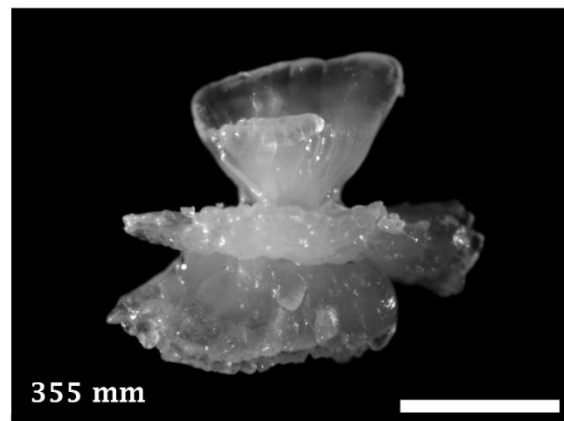
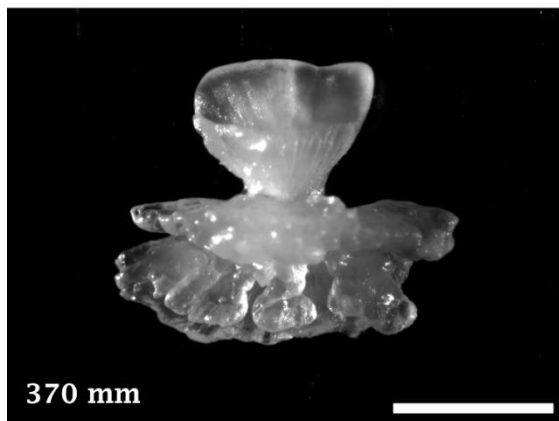
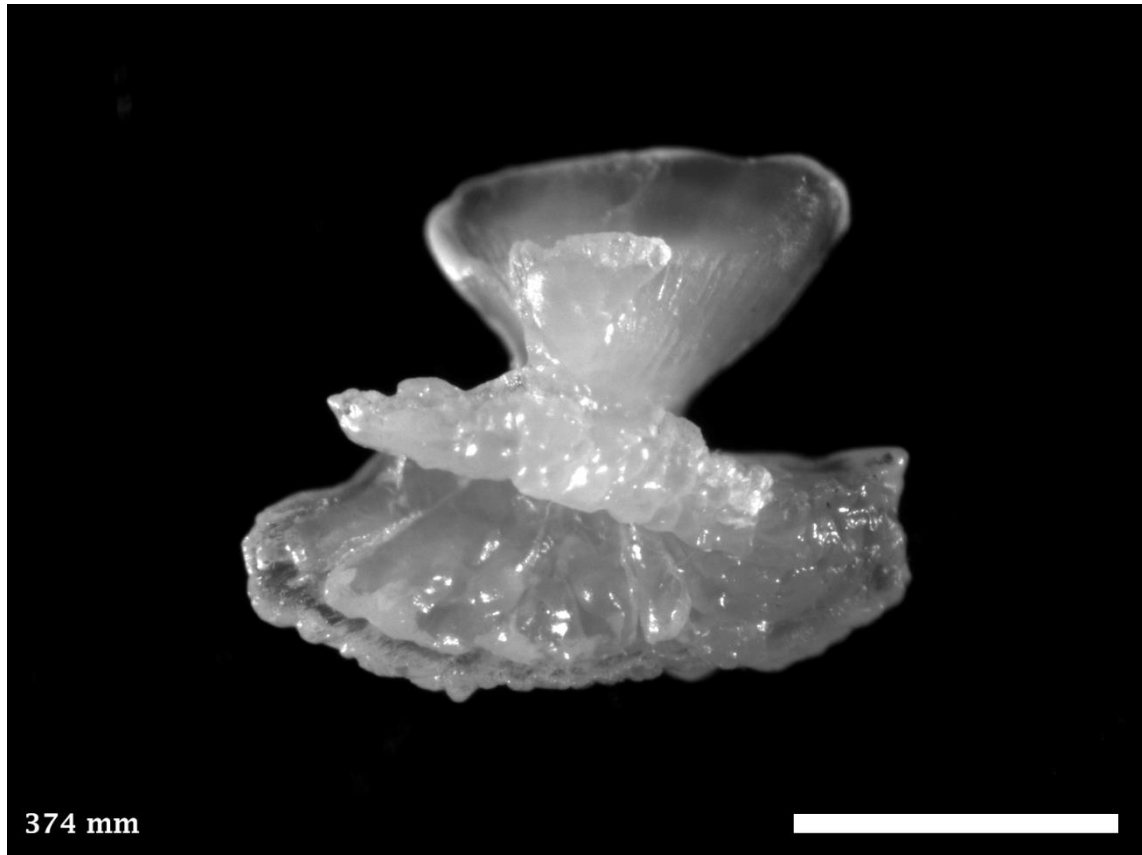


Distribution and Length: Coastal reefs from Shark Bay, WA south around to Port Phillip Bay, Victoria. 350 mm TL.



5.255 *Meuschenia hippocrepis*, Horseshoe Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

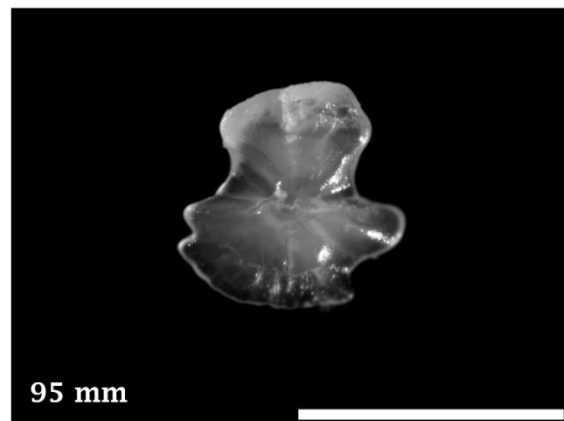
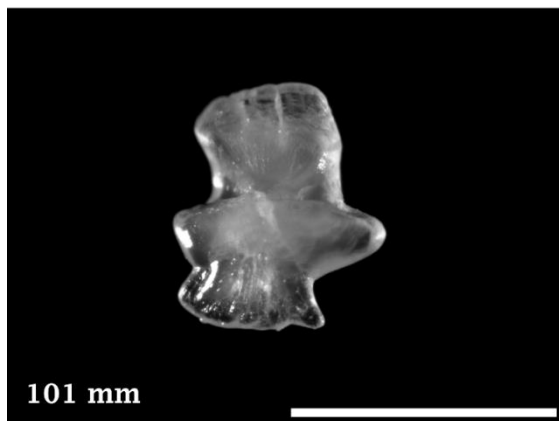


Distribution and Length: Reefs and coastal waters from Houtman Abrolhos, WA south around to Wilson's pomontory, Vic, including northern Tasmania. 640 mm TL.



5.256 *Monacanthus chinensis*, Fanbelly Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

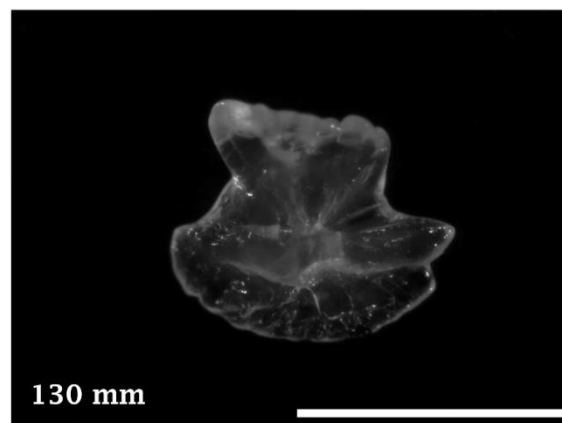
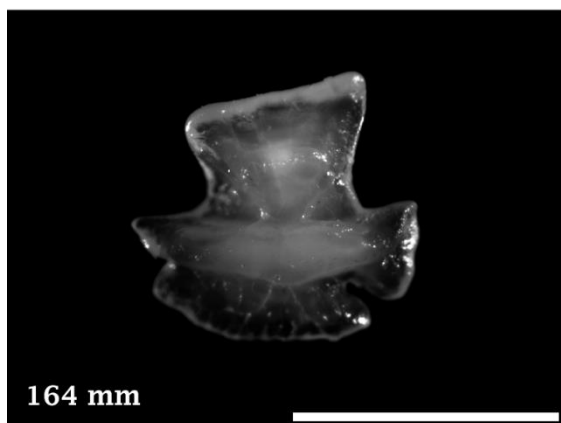
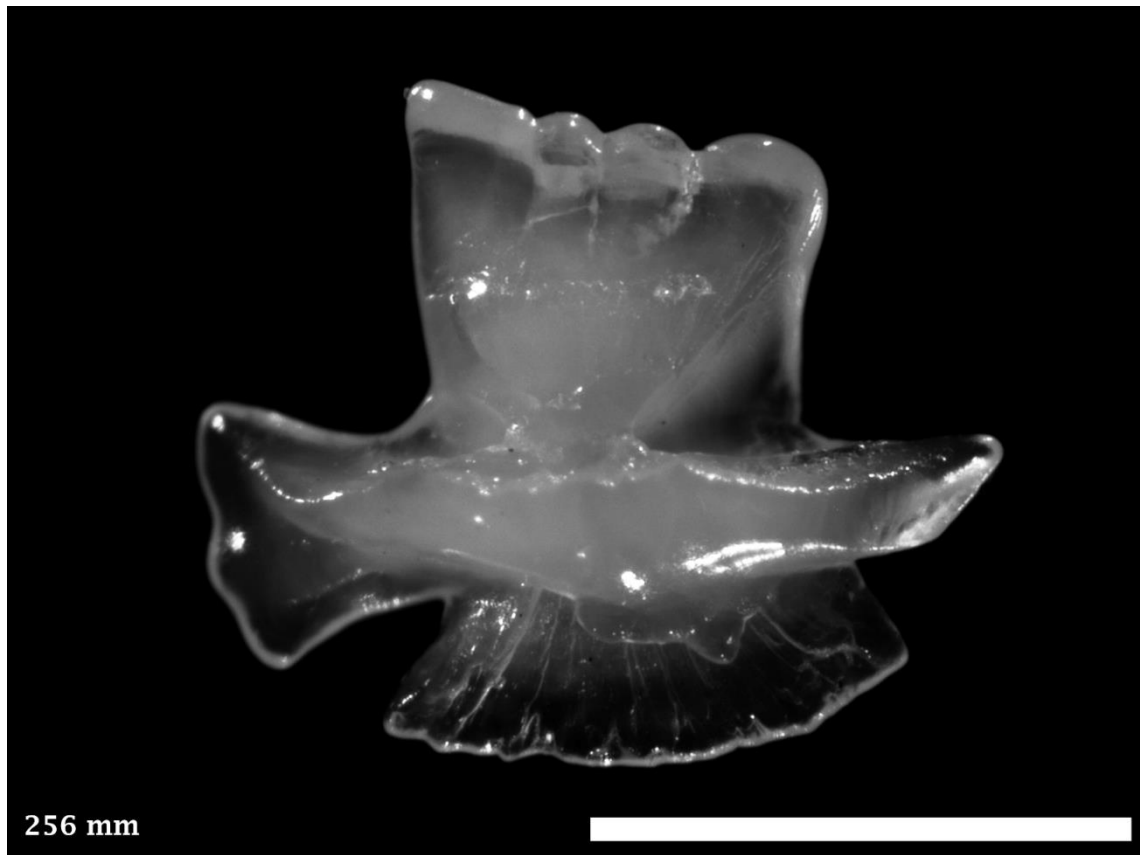


Distribution and Length: Estuarine and coastal waters from Geographe Bay, WA North around to Victoria. Note: Right otoliths. 380 mm TL.



5.257 *Nelusetta ayraudi*, Ocean Jacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

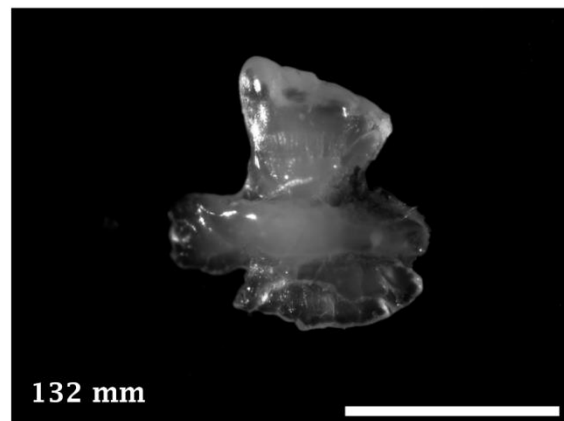
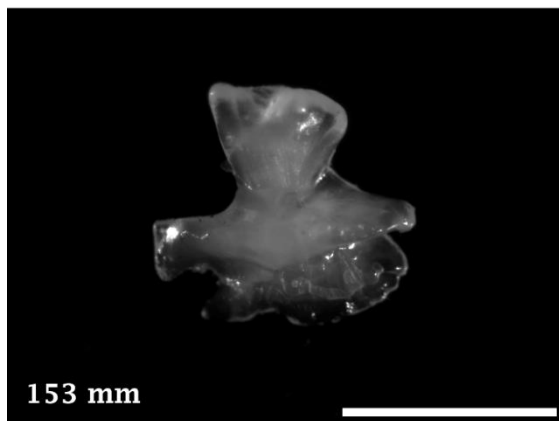
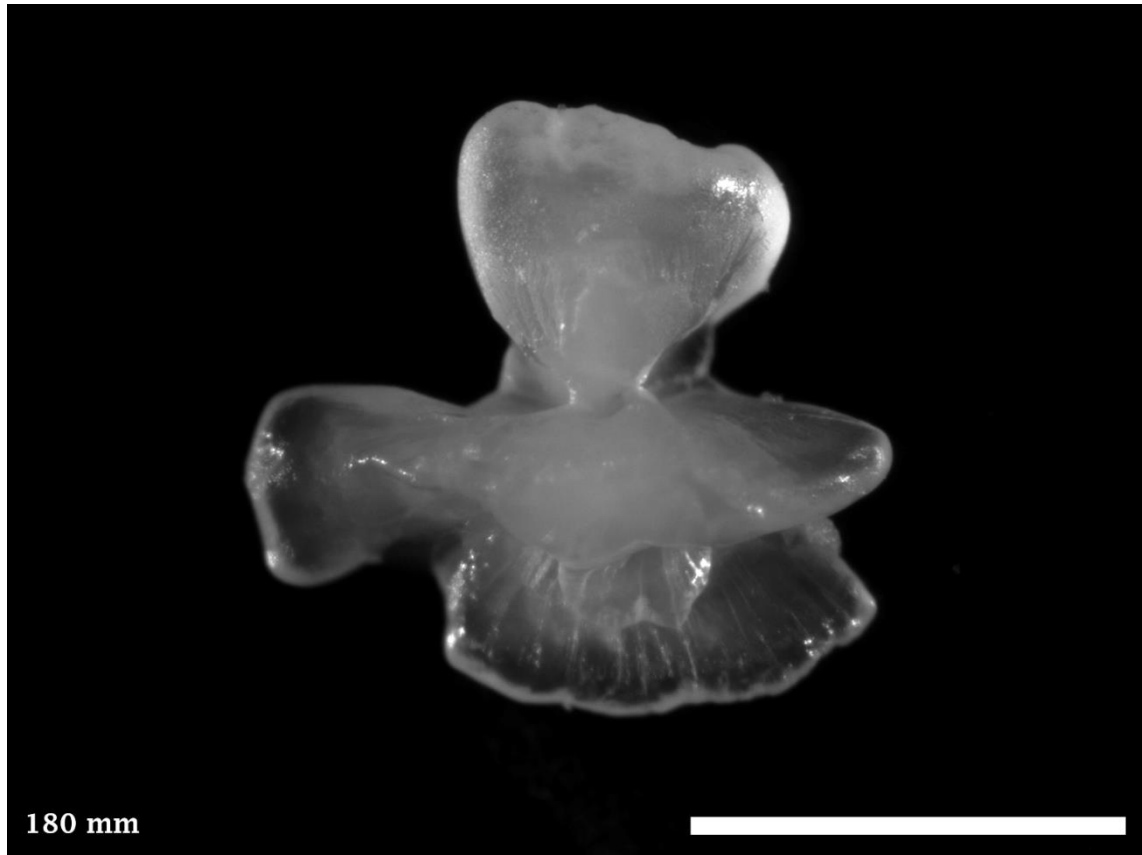


Distribution and Length: Adults in deep offshore waters and juveniles in estuarine and coastal waters from North West Cape, WA south around to southern Queensland, including Tasmania. 710 mm TL.



5.258 *Scobinichthys granulatus*, Rough Leatherjacket

TETRAODONTIFORMES MONACANTHIDAE (Leatherjackets)

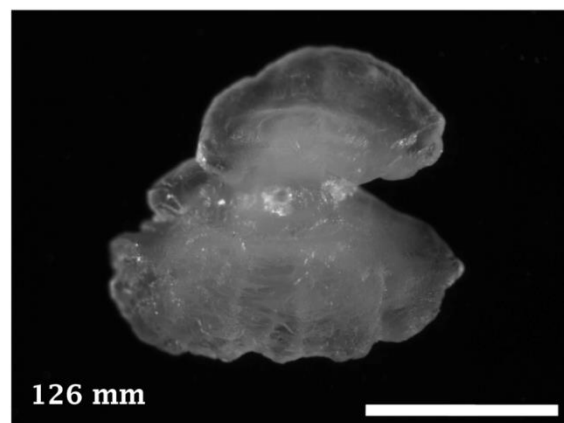
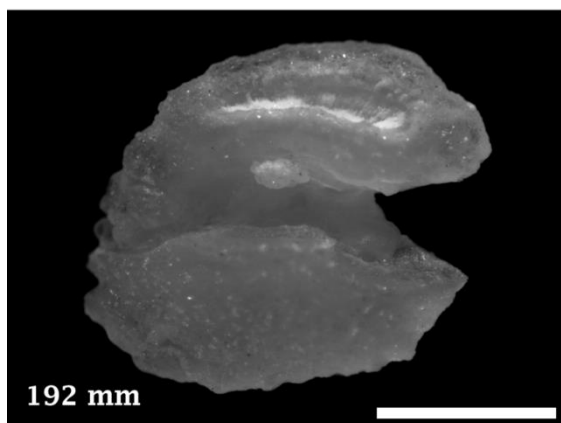
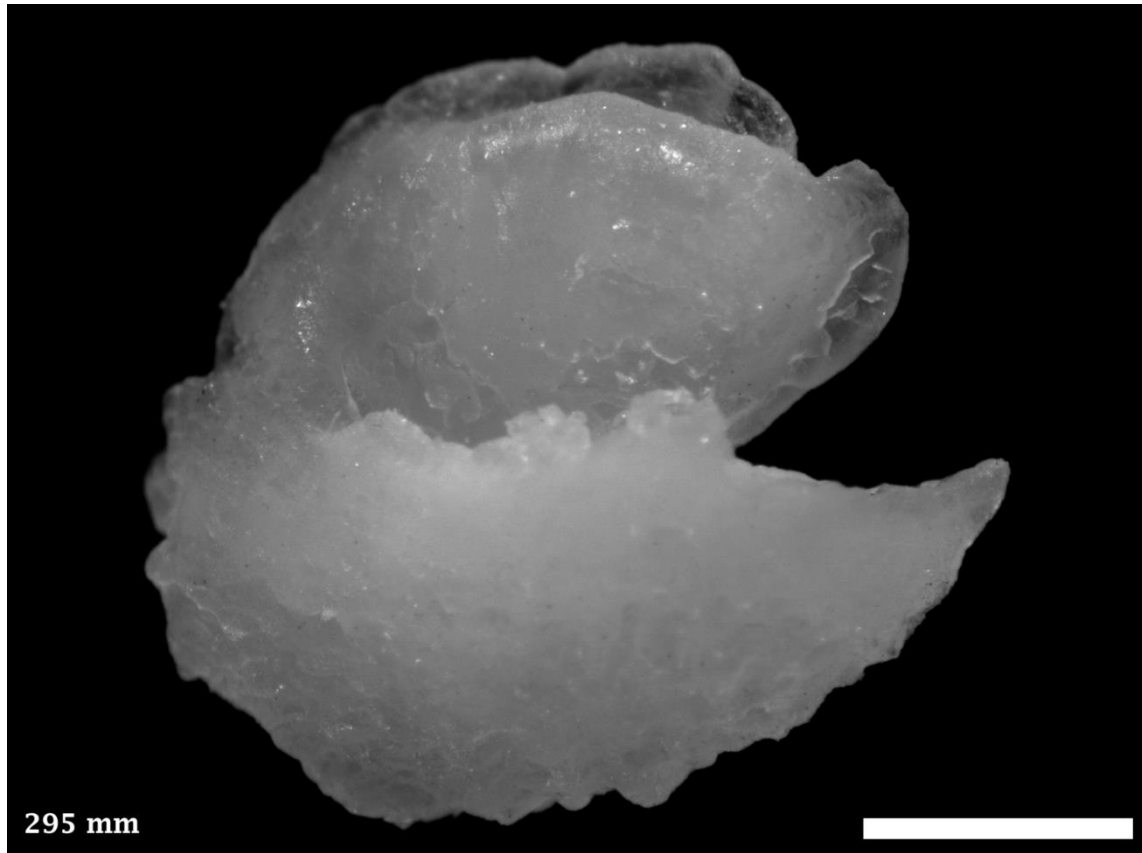


Distribution and Length: Estuarine and coastal waters from Shark Bay, WA south around to Maroochydore, Qld, including Tasmania. 350 mm TL.



5.259 *Anoplocapros amygdaloides*, Western Smooth Boxfish

TETRAODONTIFORMES OSTRACIIDAE (Boxfishes and Cowfishes)

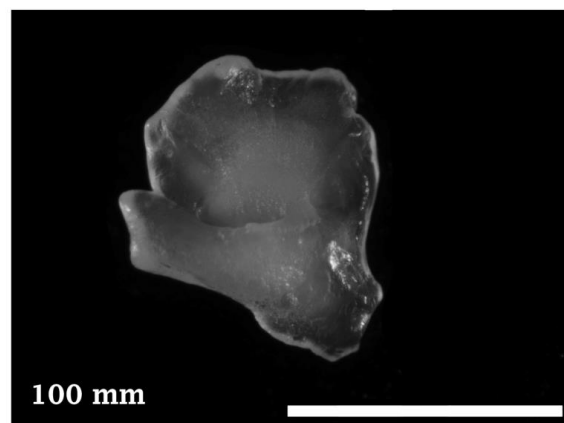
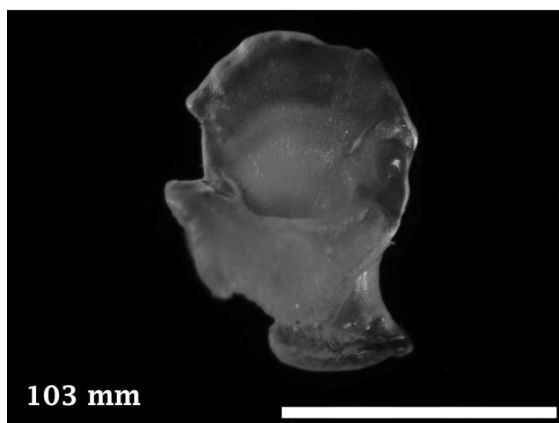
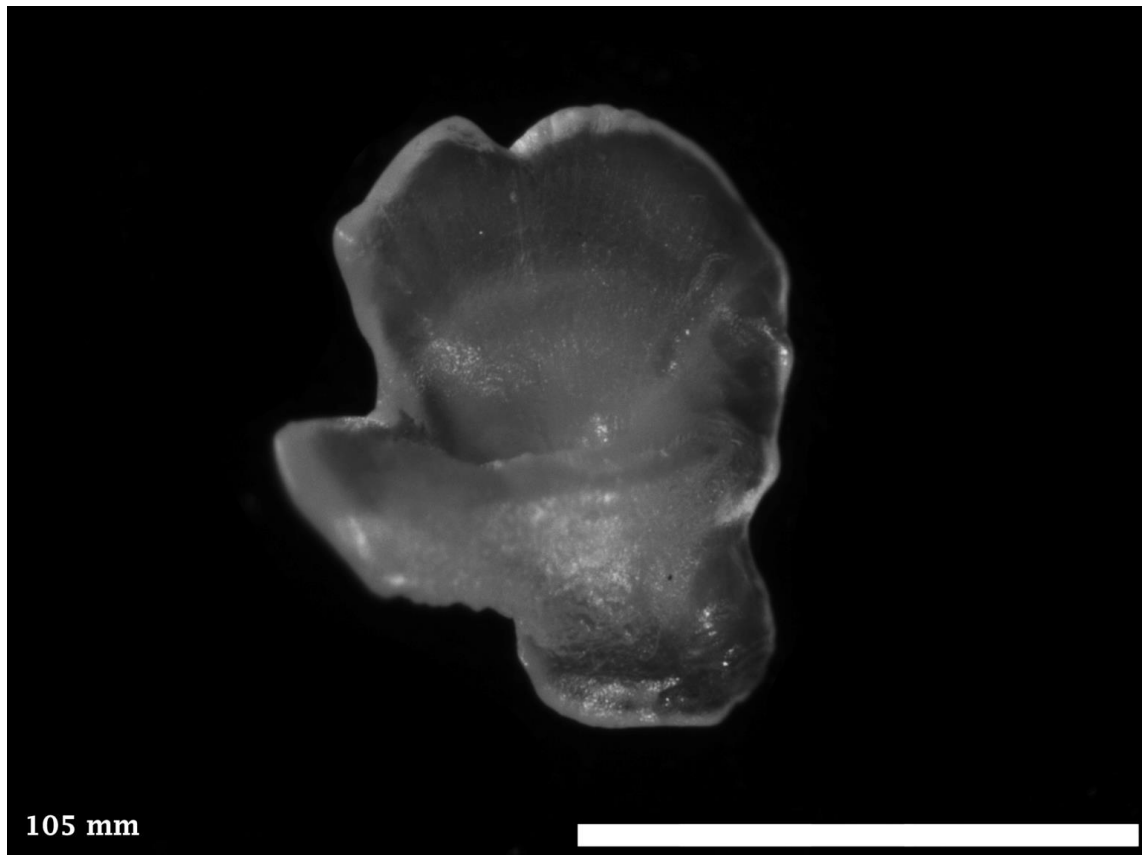


Distribution and Length: Coastal waters from Shark Bay, WA south around to the Great Australian Bight. 390 mm TL.



5.260 *Tetrosomus reipublicae*, Smallspine Turretfish

TETRAODONTIFORMES OSTRACIIDAE (Boxfishes and Cowfishes)

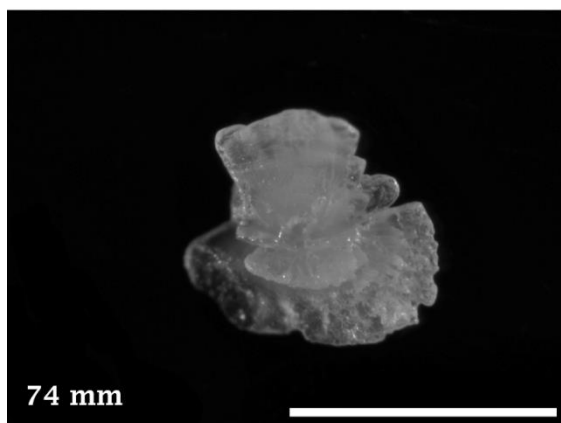
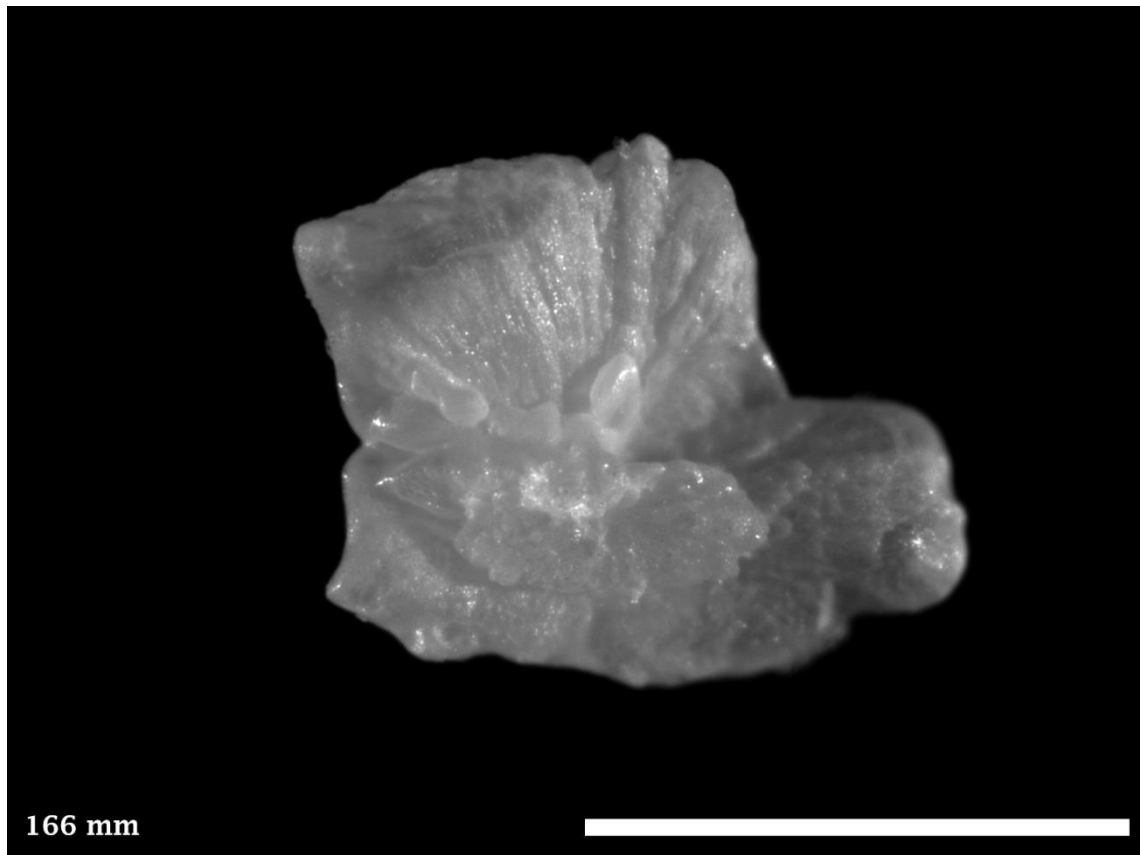


Distribution and Length: Coastal waters from Albany, WA north around to southern NSW. 300 mm TL.



5.261 *Contusus brevicaudus*, Prickly Toadfish

TETRAODONTIFORMES TETRAODONTIDAE (Toadfishes)

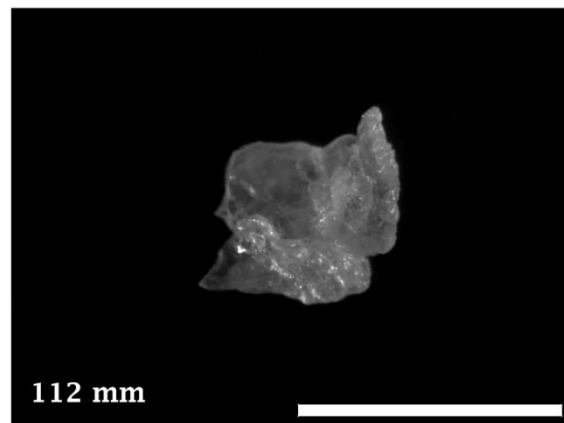
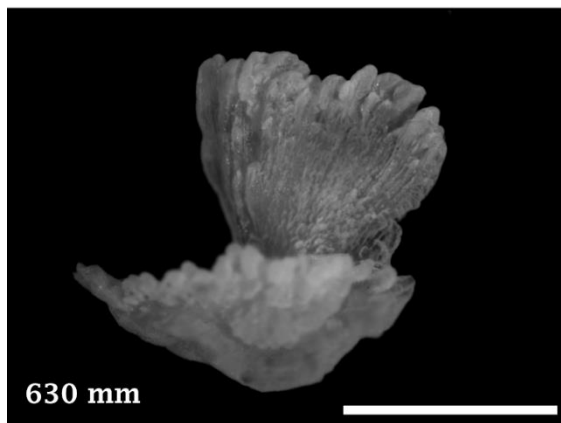
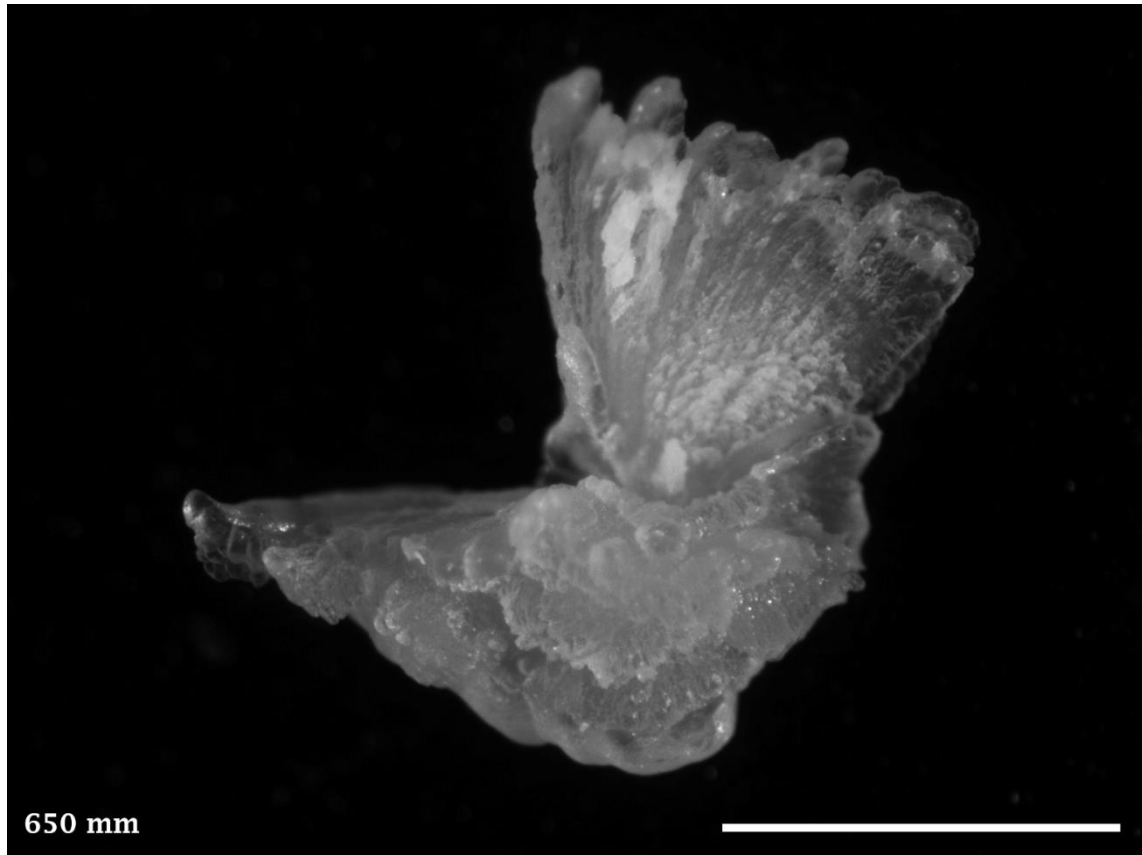


Distribution and Length: Coastal waters from Rottnest Island, WA south around to Jervis Bay, NSW, including Tasmania. 260 mm TL.



5.262 *Lagocephalus scleratus*, Silver Toadfish

TETRAODONTIFORMES TETRAODONTIDAE (Toadfishes)

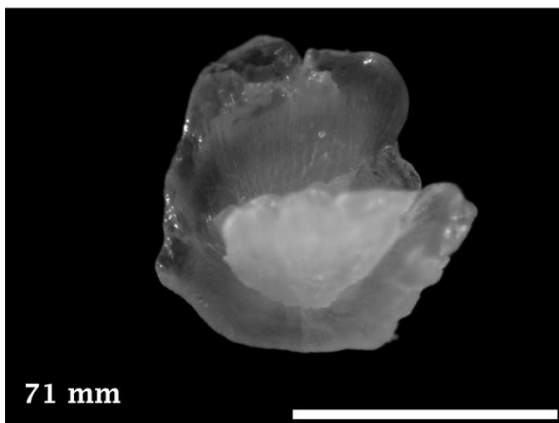
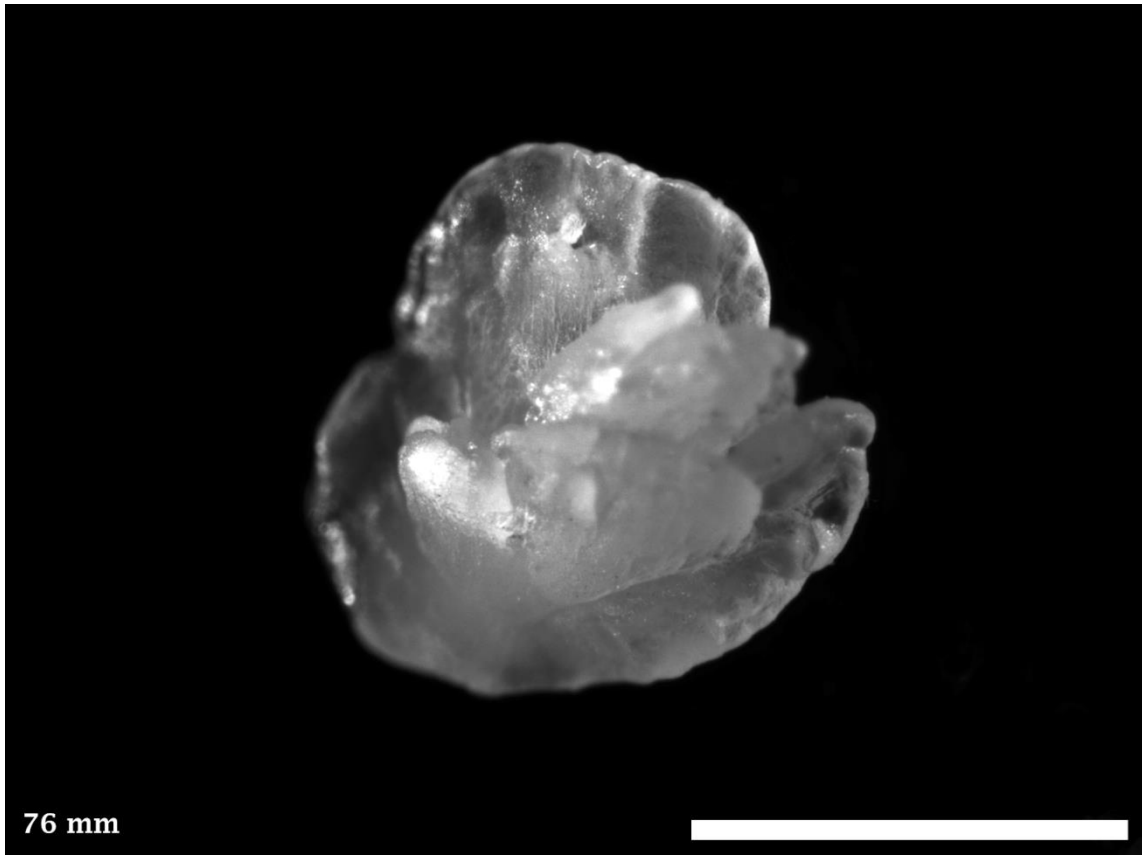


Distribution and Length: Coastal waters circum-Australia, except Victoria and Tasmania. 970 mm TL.



5.263 *Polyspina piosae*, Orangebarred Puffer

TETRAODONTIFORMES TETRAODONTIDAE (Toadfishes)

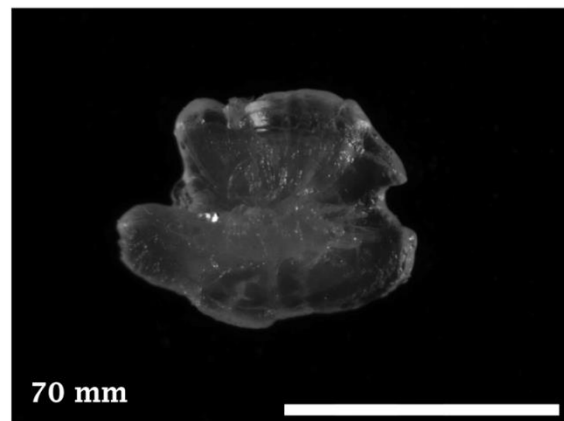
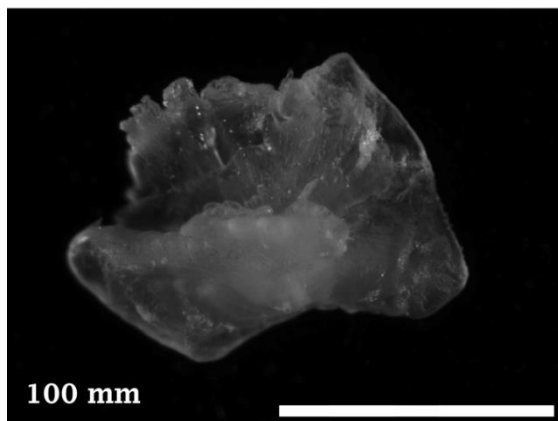
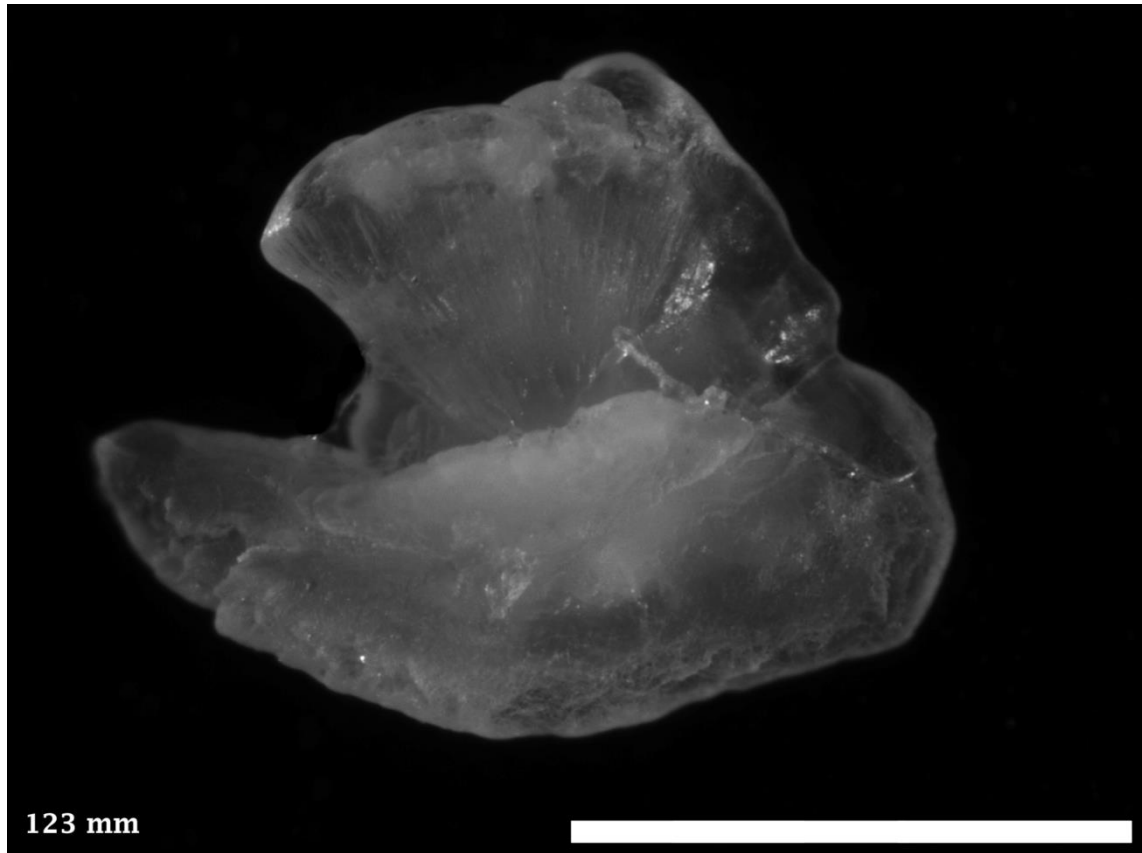


Distribution and Length: Coastal waters from Rottnest Island, WA south around to Kangaroo Island, SA. Note: Right otoliths. 90 mm TL.



5.264 *Torquigener pallimaculatus*, Rusty-spotted Toadfish

TETRAODONTIFORMES TETRAODONTIDAE (Toadfishes)

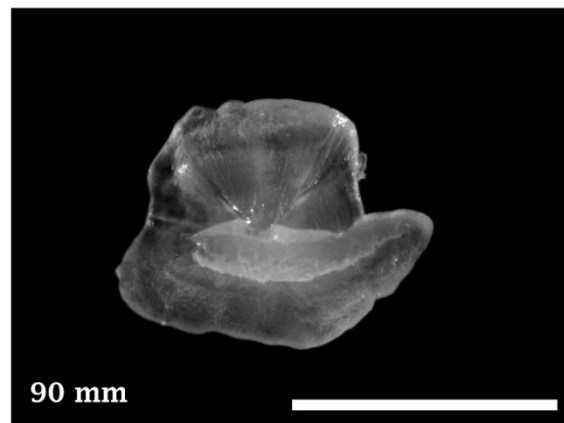
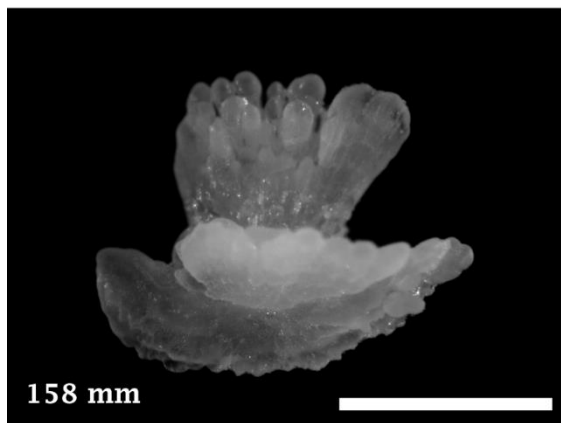
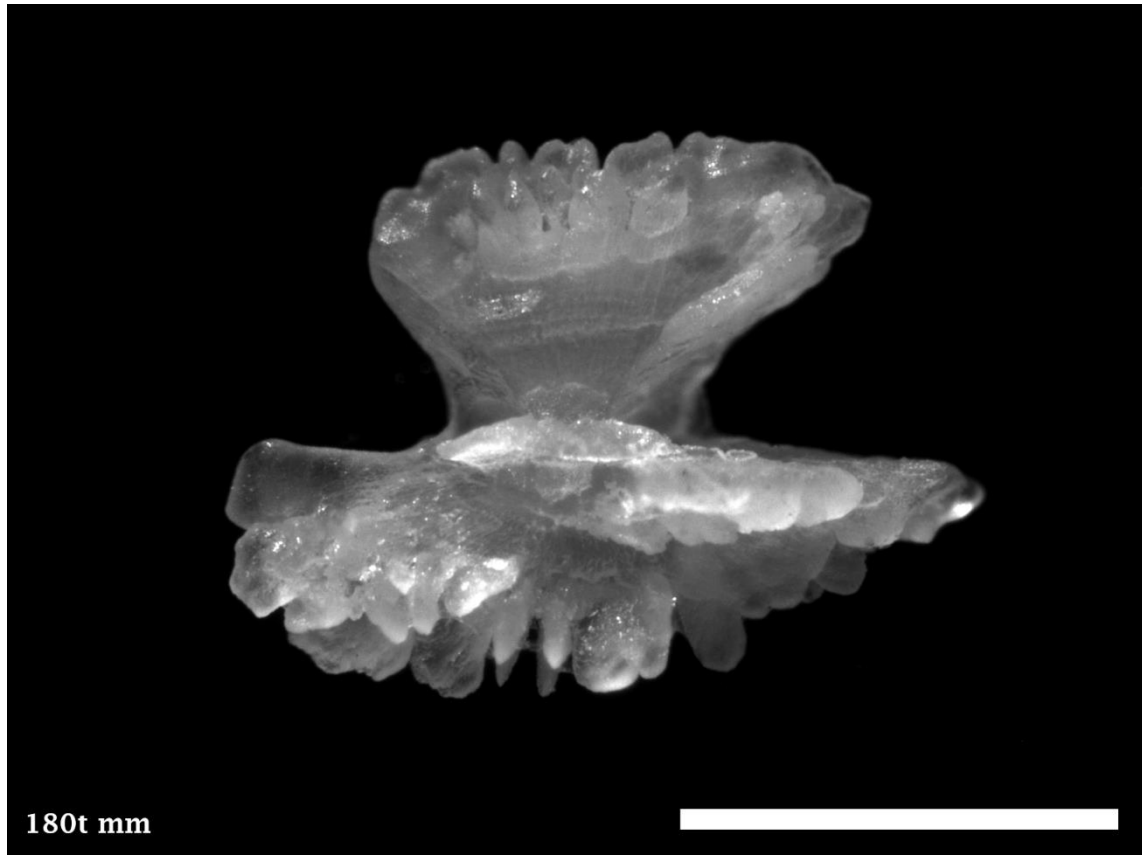


Distribution and Length: Coastal waters from Fremantle, WA north to Northern Australia (Allen 1997). 150 mm TL.



5.265 *Torquigener pleurogramma*, Weeping Toadfish

TETRAODONTIFORMES TETRAODONTIDAE (Toadfishes)

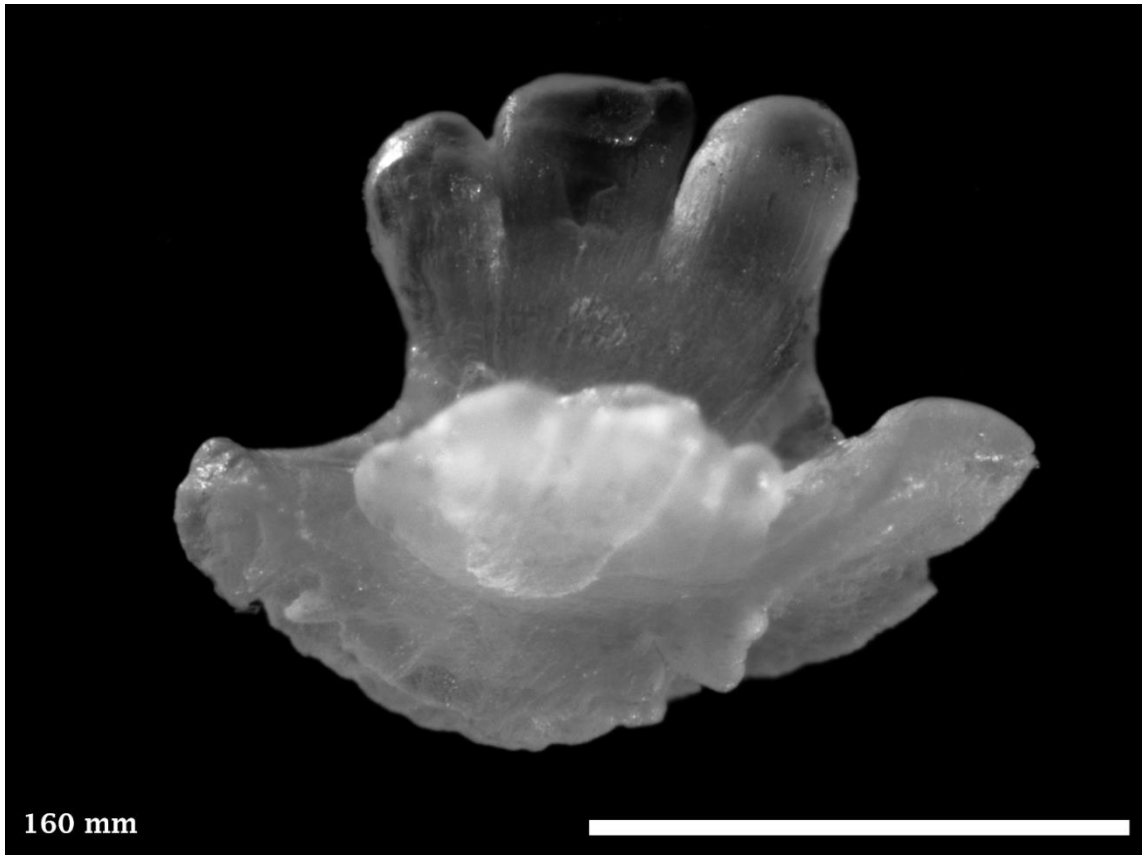


Distribution and Length: Estuarine and coastal waters from Coral Bay, WA south around to Adelaide, SA and Harvey Bay, Qld south to eastern Victoria. 230 mm TL.



5.266 *Torquigener vicinus*, Orangespotted Puffer

TETRAODONTIFORMES TETRAODONTIDAE (Toadfishes)

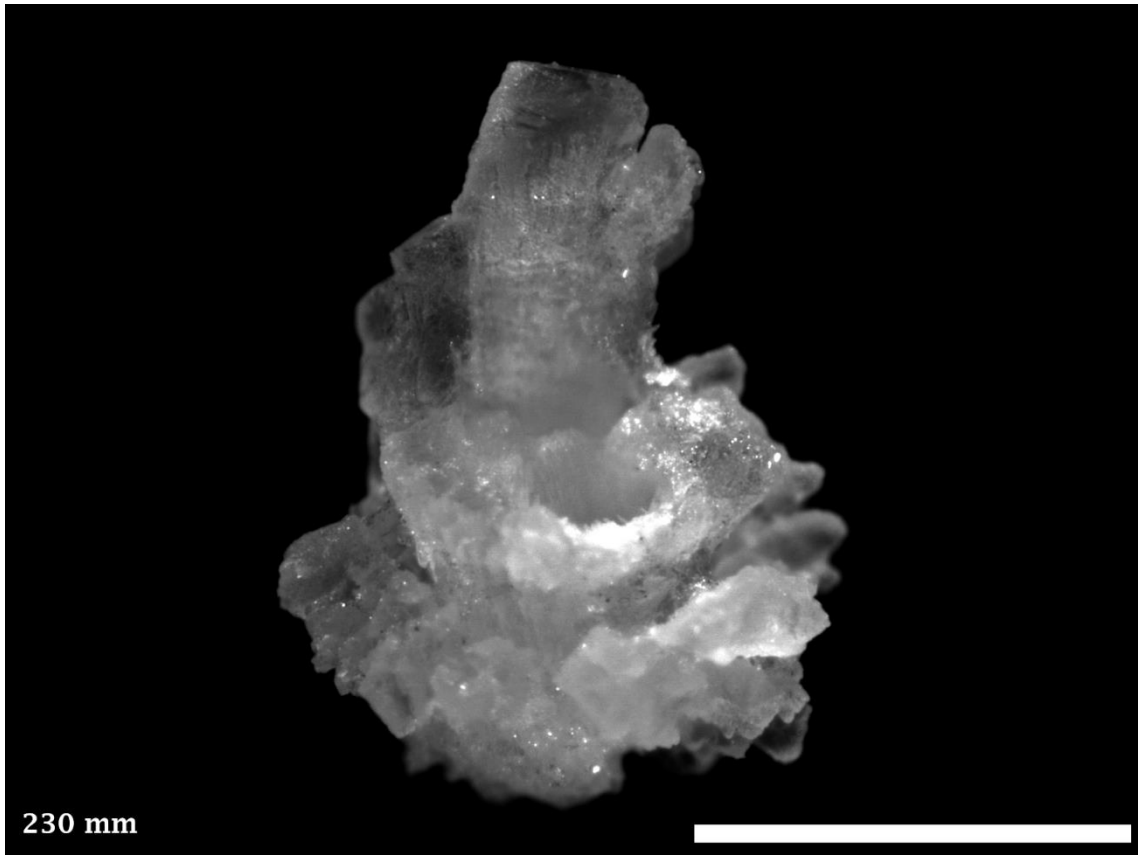


Distribution and Length: Estuarine and coastal waters from Geraldton, WA south to Geographe Bay, WA. 230 mm TL.



5.267 *Allomycterus pilatus*, Australian Burrfish

TETRAODONTIFORMES DIODONTIDAE (Porcupinefishes)



Distribution and Length: Coastal and offshore waters from Rottnest Island, WA south around to southern Queensland, including Tasmania. 500 mm TL.



