

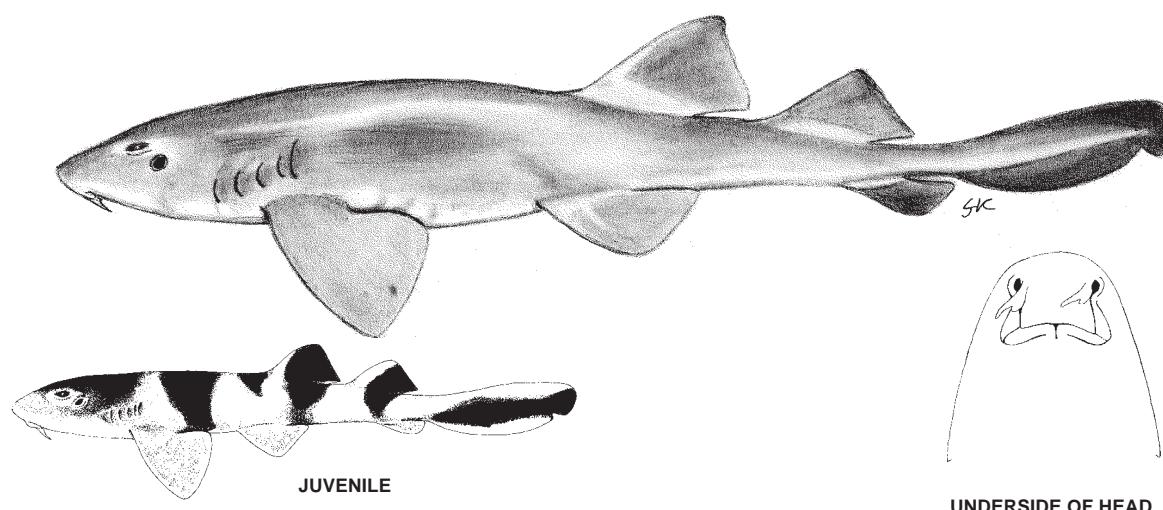
Heteroscyllium colcloughi* (Ogilby, 1908)*Fig. 108**

Brachaelurus colcloughi Ogilby, 1908, *Proc. Roy. Soc. Queensland*, 1907, 21: 4. "Type": Amateur Fisherman's Association of Queensland Museum AFAQ no. 410, an immature male 460 mm TL (extended) according to the original description, or 457 mm TL (extended) according to Ogilby and McCulloch (1908, *J. Proc. Roy. Soc. N.S. Wales*, 42: 285), from Mud Island, Moreton Bay, Queensland, Australia. According to Ogilby (1916, *Mem. Queensland Mus.* 5: 76) this specimen was "accidentally destroyed". J. Johnson (pers. comm.), Queensland Museum, July 31, 1996) noted that the Queensland Museum had made an effort to locate the AFAQ specimens and failed. Ogilby (1908) also noted: "There is a second specimen of about the same size in the State Museum" [Queensland Museum, where J.D. Ogilby was based]. Ogilby and McCulloch (1908) also cite this as: "A second specimen, also a young male of similar size, has been for some years in the Queensland Museum." The description fits QM I-965, a 516 mm adolescent male from Moreton Bay which was examined and measured by the writer and which is labelled "lectotype" in Ogilby's handwriting (J. Johnson, pers. comm.). The two specimens apparently are syntypes because they were both mentioned in the original description. Following Ogilby's apparent wishes on its label, the syntype specimen QM I-965 is designated here as lectotype.

Synonyms: None.

Other Combinations: None.

FAO Names: En - Bluegray carpet shark; Fr - Requin aveugle gris-bleu; Sp - Tiburón ciego gris.

**Fig. 108 *Heteroscyllium colcloughi***

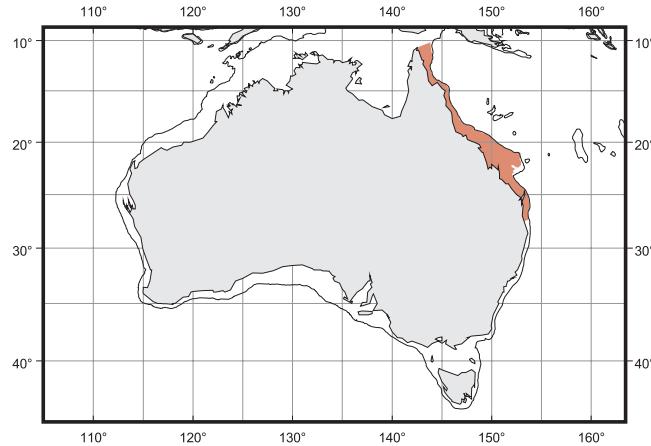
Field Marks: A small stout to slender shark with a pair of long barbels each bearing an expanded, hooked or rounded posterior flap at its midlength, nostrils with nasoral grooves and circumnarial grooves, a short mouth ahead of the eyes, symphysial groove present on the chin, no dermal lobes on sides of head, large spiracles; two spineless dorsal fins and an anal fin, the first dorsal fin larger than the second and with origin over the pelvic-fin bases, a short precaudal tail and caudal fin, and colour greyish above and white below without light spots. Young with conspicuous black and white markings on back, dorsal fins and caudal fin, fading with growth and inconspicuous in adults.

Diagnostic Features: See genus *Heteroscyllium* above.

Distribution: Apparently confined to the western South Pacific, off Australia (southern and northeast Queensland). Most records are from Moreton Bay just east of Brisbane, with a few records north or south of it between Gladstone and Coolangatta, and in northeastern Queensland off the York Peninsula and the Great Barrier Reef.

Habitat: A little-known tropical or subtropical, inshore bottom shark of the Queensland continental shelf, most records from shallower than 6 m depth on soft bottom or around wrecks.

Biology: A rare to uncommon species, with biology poorly known. Presumably feeds on benthic invertebrates, but diet not recorded. Ovoviparous (aplacental viviparous), with litters of six or seven young. Apparently egg-cases are lost early in development, and term or near-term foetuses are not enclosed in hard or soft egg-cases. Near-term foetuses 164 to 168 mm long had relatively large



yolk-sacks filled with yolk but these were lost in term foetuses 174 to 186 mm long, suggesting that foetal nutrient is primarily through vitelline yolk. As with *Brachaelurus waddi* this species also closes its eyes when removed from the water (J. Johnson, pers. comm.).

Size: Maximum to at least 75.5 cm, pregnant females 65.8 to 75.5 cm, males adolescent at ca. 48.2 to 51.6 cm. Term foetuses 174 to 184 mm, size at birth probably between 17 to 18 cm.

Interest to Fisheries and Human Impact: A harmless shark of no interest to fisheries but occasionally caught by sports anglers. It is partly sympatric with *Brachaelurus waddi* off southern Queensland and has been confused with it in the past.

By analogy to *B. waddi* and because of its inshore benthic habitat this is likely to be a hardy aquarium shark and an attractive exhibit (particularly the boldly barred young). Some of these sharks have been kept in aquaria (J. Stevens, pers. comm.). If this species enters the aquarium trade in any numbers this should be strictly regulated.

Restricted habitat, distribution in areas heavily and increasingly utilized by people, and possibly rarity suggested by few records in suitable habitat in the relatively well-surveyed waters where it occurs makes it inherently vulnerable to depletion. Its distribution, behaviour, ecology, and conservation status need to be studied in detail by diving surveys. Surveys of angler catches and commercial demersal landings need to be made to determine its presence in inshore fisheries. This species has a status of *Vulnerable* in the IUCN 2000 Red List.

Local Names: Colclough's shark or Colcloughs shark, Blue-grey catshark, Blue-grey shark.

Literature: Ogilby (1908, 1916); Ogilby and McCulloch (1908); Garman (1913); McCulloch and Whitley (1925); Whitley (1934, 1940); Fowler (1929, 1941, 1967a); White (1937); Bigelow and Schroeder (1948); Grant (1972, 1982); Compagno (1973, 1981b, 1982, 1984); Applegate (1974); Dingerkus (1986); Last and Stevens (1994); J. Johnson (pers. comm.), P. Last (pers. comm.), J. Stevens (pers. comm.).

2.3.3 Family ORECTOLOBIDAE

Family: Orectolobidae Gill, 1896, *Proc. U.S. Natl. Mus.* 18(1057): 212. Also subfamily Orectolobinae Fowler, 1934, *Proc. Acad. Nat. Sci. Philadelphia*, 85: 238 (Family Orectolobidae).

Type Genus: *Orectolobus* Bonaparte, 1834.

Number or Recognized Genera: 3.

Synonyms: Subfamily Crossorhinae Swainson, 1839: 318 (Family Squalidae). Type genus: *Crossorhinus* Müller and Henle, 1837.

FAO Names: En - Wobbegongs; Fr - Requins-tapis; Sp - Tiburones tapiceros.

Field Marks: These are distinctive flattened, variegated sharks, differing from all others (except angel sharks, Squatinidae), having narrow dermal flaps along the sides of the head. Wobbegongs differ from angel sharks in having anal fins and separate cermal lobes among many other differences. Wobbegongs also have long barbels, short, nearly terminal mouths in front of the eyes, nasoral grooves and circumnarial grooves and flaps, symphyseal grooves, large spiracles and dorsolateral eyes.

Diagnostic Features: Head very broad and flattened, with unique lateral flaps of skin. Snout truncated. Eyes dorsolaterally situated on head and with strong subocular ridges below them. Eyes without movable upper eyelids but with subocular pockets and ridges. Spiracles very large and larger than eyes, with prominent raised external rims; spiracles somewhat below, behind and lateral to eyes. Gill slits small, fifth gill slit well-separated or close to fourth but not overlapping it; internal gill slits without filter screens. Nostrils with very long pointed or branched barbels, circumnarial folds and circumnarial grooves around outer edges of incurrent apertures. Nasoral grooves short and strongly developed. Mouth large, slightly arched and nearly transverse, and nearly terminal on head. Lower lip not trilobate and without lateral orolabial grooves connecting edge of lip with medial ends of lower labial furrows, but with a longitudinal symphyseal groove on chin. Lower labial furrows extending medially nearly to symphysis, but not connected medially by a mental groove or groove and flap. Teeth strongly differentiated in upper and lower jaws, with three rows of fang-like teeth at the upper symphysis and two rows at the lower. Tooth row count 23 to 26/19. Teeth with a strong medial cusp, lateral cusplets variably present or absent, and labial root lobes weak. Teeth orthodont with a central pulp cavity and no plug of osteodentine. Body considerably depressed, without ridges on sides. Precaudal tail shorter than body. Caudal peduncle without lateral keels or precaudal pits. Pectoral fins moderate-sized or very large, broad and rounded. Pectoral fins aplesodic and with fin radials not expanded into fin web. Pectoral propterygium large and separate from mesopterygium and metapterygium; pectoral-fin radial segments three at most, and with longest distal segments about 0.5 times the length of longest proximal segments. Pelvic fins larger than dorsal and anal fins, nearly as large as pectoral fins and with anterior margins 0.6 to 0.8 times the pectoral-fin anterior margins. Claspers without mesospurs, claws or dactyls. Dorsal fins equal-sized, first dorsal-fin origin over or slightly behind

the pelvic-fin insertion, insertion far behind the pelvic-fin rear tips. Anal fin about half as large as second dorsal fin or less, with broad base, subangular or narrowly rounded apex, origin about opposite rear third of second dorsal-fin base or its insertion, and insertion separated by a narrow notch much less than base length from lower caudal-fin origin. Caudal fin short and not crescentic, weakly heterocercal with its upper lobe at a low angle above the body axis; dorsal caudal-fin margin less than a fourth as long as the entire shark. Caudal fin with a strong terminal lobe and subterminal notch but without a ventral lobe, preventral and postventral margins not differentiated and forming a continuous curve. Vertebral centra with well-developed radii. Total vertebral count 149 to 158, monospondylous precaudal count 41 to 52, diplospondylous precaudal count 42 to 62, diplospondylous caudal count 49 to 62, and precaudal count 87 to 106. Cranium moderately broad and not greatly expanded laterally. Medial rostral cartilage extremely short and reduced to a low projection. Nasal capsules greatly depressed and with double longitudinal fenestrae, internarial septum compressed but low, not expanded laterally. Orbita with small foramina for preorbital canals, medial walls not fenestrated around the optic nerve foramina. Supraorbital crests present on cranium but not laterally expanded and pedicellate. Suborbital shelves very broad and not reduced. Cranial roof without fenestrae. Basal plate of cranium with separate pairs of stapedial and carotid foramina. Adductor mandibulae muscle of jaws with two divisions. Preorbitalis muscles not extending onto posterodorsal surface of cranium. No anterodorsal palpebral depressor, rostromandibular, rostrorhynchal or ethmonuchal muscles. Valvular intestine of ring type with 23 to 33 turns. Development ovoviparous. Size small to large with adults between 60 cm and at least 3 m. Colour pattern highly developed, including dark and light spots, dark saddles, rings and reticulations on back.

Distribution: Wobbegongs are common, largish flattened bottom sharks that are endemic at present to warm-temperate to tropical continental waters of the western Pacific. They are most diverse in Australian and New Guinean waters, but occur northwards to Japan.

Habitat: Wobbegongs occur in inshore and offshore bottom habitats from the intertidal down to at least 110 m. They are often found on rocky and coral reefs or on sandy bottom, where they lurk and are concealed in part by their cryptic coloration and dermal lobes on their heads.

Biology: Wobbegongs are reportedly sluggish fishes, moving little, but can clamber around with their paired fins on the bottom and even climb partway out of the water while moving between tidepools. At least two species may attain a size of 3.2 to 3.7 m. These sharks are ovoviparous, with large litters of 20 or more young. Wobbegongs are powerful bottom predators with heavy jaws and greatly enlarged, dagger-shaped, extremely sharp teeth in the front of their mouths. They feed on bottom fishes, crabs, lobsters, octopi, and other bottom animals.

Interest to Fisheries and Human Impact: Wobbegongs are utilized for food in Australia and off China, Japan, Malaysia (Sabah) and probably elsewhere where they occur; their colourful skins are also used for leather. Wobbegongs can bite when captured or when provoked or stepped upon, and have inflicted severe lacerations on the limbs of people. There are rare records of large wobbegongs biting off people's feet or killing them, but these need to be verified. Wobbegongs are often difficult to see against the bottom and can be contacted accidentally. These sharks should be treated with respect because of their strong dentition, as with angel sharks (Squatinidae), even though they do not appear to be particularly prone to bite people unless provoked. Michael (1993) thought that these sharks had poor visual acuity and tended to bite at any object that moved near their heads, so that people should avoid placing their limbs near them. Wobbegongs are regularly kept in public aquaria in Australia, Europe, and the United States, and are often viewed by divers on the Great Barrier Reef of Australia and probably off Japan. They have bred in captivity.

Local Names: Wobbegongs, Carpetsharks, Carpet sharks; Kovrovye akuly (Russian).

Remarks: The arrangement of this family follows Compagno (1984), Dingerkus (1986), and Last and Stevens (1994). Although apparently a monophyletic group and the sister taxon of the Brachaeluridae (Dingerkus, 1986; Compagno, 1988), the Orectolobidae requires a detailed morphological and genetic investigation to elucidate the interrelationships of its component taxa. Dingerkus (1986) suggested that the highly derived *Eucrossorhinus* was the sister genus of *Orectolobus*, and both formed the sister taxon of *Sutorectus*, but this is complicated by *Orectolobus* sp. A, which has some characters, including its narrow interdorsal space, slightly lower dorsal fins, and longitudinal rows of small dermal knobs and ridges in young, that suggest that it is intermediate between typical *Orectolobus* and the bizarre *Sutorectus tentaculatus*.

Literature: Ogilby and McCulloch (1908); Regan (1908a); Garman (1913); Whitley (1940); Fowler (1941); Compagno (1984); Dingerkus (1986); Michael (1993); Last and Stevens (1994).

Key to Genera:

- 1a. Chin with highly branched dermal lobes; dermal lobes on sides of head mostly extensively branched (Fig. 109); body with a reticular pattern of narrow dark lines ***Eucrossorhinus***
- 1b. Chin without dermal lobes; dermal lobes on sides of head mostly simple or with a few branches (Fig. 110); colour pattern variable, but without a reticular pattern of narrow dark lines → 2

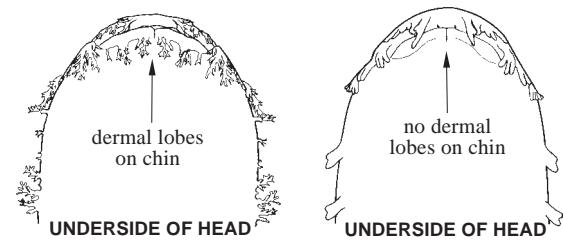


Fig. 109 *Eucrossorhinus*

Fig. 110 *Orectolobus*

2a. Head and body without tubercles or with small ones or inconspicuous dermal ridges in young (lost in adults); dorsal fins high, height at least three-fourths of base length; origin of first dorsal fin behind midbases of pelvic fins (Fig. 111). *Orectolobus*

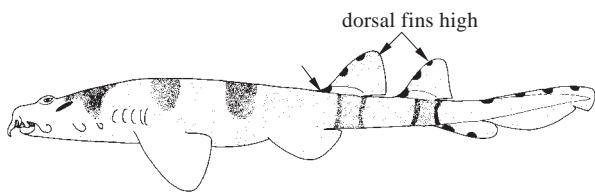


Fig. 111 *Orectolobus*

2b. Head and body covered by large rounded tubercles; dorsal fins long and low, height about half of base length; origin of first dorsal fin anterior to pelvic-fin midbases (Fig. 112) *Sutorectus*

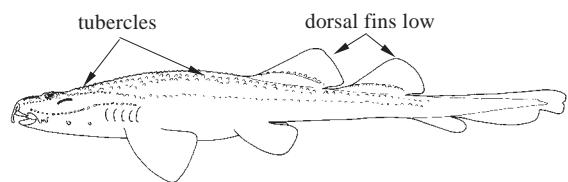


Fig. 112 *Sutorectus*

***Eucrossorhinus* Regan, 1908**

Genus: *Eucrossorhinus* Regan, 1908a, Proc. Zool. Soc. London, 1908: 357.

Type Species: *Eucrossorhinus dasypogon* Regan, 1908, by monotypy, equals *Crossorhinus dasypogon* Bleeker, 1867.

Number of Recognized Species: 1.

Synonyms: Genus *Crossorhinus* Compagno, 1984: 179. Typographical error for *Crossorhinus dasypogon* Bleeker, 1867.

Diagnostic Features: Head very broad, its width slightly greater than its length from snout tip to fifth gill openings. Chin with a bushy beard of highly branched dermal lobes. Dermal lobes of sides and front of head highly branched and numerous, in approximately 24 to 26 pairs, forming a virtually continuous fringe from snout tip to pectoral-fin bases. Nasal barbels branched, with complex multiple lobes. Mouth broad, width about 11% of total length. Head and body without enlarged tubercles on body, except for those above eyes. Trunk very broad, width across pectoral-fin insertions about equal to head length. Precaudal tail rather short, distance from pelvic-fin insertion to lower caudal origin about equal to head length. Interspace between first and second dorsal fins longer than first dorsal-fin inner margin and slightly more than half first dorsal-fin base. Pectoral and pelvic fins very large, distance from pectoral-fin insertions to pelvic-fin origins about equal to pectoral-fin bases and less than pelvic-fin lengths from origins to free rear tips. Dorsal fins high and short, height of first dorsal fin about equal to its base length, length of first dorsal fin base less than pelvic-fin length. Origin of first dorsal fin opposite posterior fourth of pelvic-fin bases. **Colour:** dorsal surface with a reticular pattern of narrow dark lines on a light background, with scattered symmetrical enlarged dark dots at the junction of lines.

Remarks: This genus was originally proposed by Regan (1908a) to separate *Crossorhinus dasypogon* Bleeker, 1867 from other wobbegongs primarily because of its supposedly even-spaced gill slits, but he also mentioned that the genus differed from *Orectolobus* by having a broader, more depressed head, smaller eyes and wider spiracles. However, Regan (1909) reversed himself and rejected *Eucrossorhinus* because his new, very similar (and ultimately conspecific) *Orectolobus ogilbyi* had the last two gill slits close together.

Ogilby and McCulloch (1908), Fowler (1941), and Stead (1963) did not recognize the genus *Eucrossorhinus* but Garman (1913), Whitley (1940), Bigelow and Schroeder (1948), Garrick and Schultz (1963), Compagno (1973, 1984), Applegate (1974), Dingerkus (1986), and Last and Stevens (1994) all retained it. *Eucrossorhinus* is morphologically divergent from other wobbegongs, but its phyletic relationships are unclear and require a detailed study of its morphology.

Two species of *Eucrossorhinus* have been recognized, *E. dasypogon* from Indonesia, and *E. ogilbyi* from Torres Straits and Papua-New Guinea. Regan (1909) distinguished the two as follows:

[*Eucrossorhinus*] *ogilbyi*: Gill slits decreasing in size from first to fourth, last larger; last two closer together than rest. Dermal lobes on sides of head in three separate groups. Origin of first dorsal fin well behind middle of total length. Distance between origins of dorsals nearly half that from origin of second dorsal fin to end of tail.

[*Eucrossorhinus*] *dasypogon*: First gill slit slightly smaller than rest, which are of equal size and equidistant. Dermal lobes on head in two separate groups. Origin of first dorsal fin in the middle of total length. Distance between origins of dorsals slightly more than one-third that from origin of second dorsal-fin to end of tail.

Fowler (1941) used *Eucrossorhinus* as a subgenus of *Orectolobus*, but placed *O. dasypogon* in *Eucrossorhinus* and *Orectolobus ogilbyi* in the subgenus *Orectolobus*. Compagno (1984) compared a possible syntype of *Eucrossorhinus dasypogon* collected by P. Bleeker from Indonesia (see below) with a larger specimen labelled *E. ogilbyi* from northern

Queensland (BMNH 1911.4.1.43, 415 mm female), as well as a much larger specimen labelled *E. dasypogon* from New Guinea (Australian Museum, Sydney, AMS I4783, 117 cm adult male). This suggested that the characters supposed to separate the two species did not hold. All specimens had the last two gill openings more closely spaced than the first three, though the New Guinea and Queensland specimens had them slightly closer than the small Indonesian specimen. All three specimens have the first four gill openings about equal in length or with the first slightly smaller; the fifth is slightly smaller than the fourth in the Indonesian specimen, slightly larger in the large New Guinea adult, and about equal to it in the Queensland specimen. In the two smaller specimens the first dorsal-fin origin is actually slightly ahead of the midlength, but slightly behind in the New Guinea adult, suggesting allometric increase in abdominal length with growth. The Indonesian specimen has the distance from the second dorsal-fin origin to the caudal-fin tip 2.7 times the space between the origins of the first and second dorsal fins, the Queensland specimen 2.6 times, and the large New Guinea specimen 2.4 times.

Compagno (1984) synonymized *E. ogilbyi* with *E. dasypogon*, and suggested that the differences listed between the two species in the literature and in the specimens he had examined represented individual and ontogenetic variation in a single species. The specimens were strikingly similar in colour pattern and general morphology, and Compagno indicated that there was nothing in the literature to suggest any significant differences between Australian, Papua-New Guinean and Indonesian *Eucrossorhinus*. This was accepted by Last and Stevens (1994).

***Eucrossorhinus dasypogon* (Bleeker, 1867)**

Fig. 113

Crossorhinus dasypogon Bleeker, 1867, *Arch. Neerl. Sci. Nat.* 2: 400, pl. 21, fig. 1. Syntypes: Rijksmuseum van Natuurlijke Histoire, Leiden, RMNH 7411 (1) Waigiu (Waigeo), RMNH 5118 (1) Aru, Indonesia, according to Eschmeyer (1998, *Cat. Fish.*: CD-ROM). Uncertain status: British Museum (Natural History), BMNH-1867.11.28.209, 215 mm immature male and noted as a syntype by Compagno (1984, *FAO Fish. Syn.* (125), 4 (1): 179) from documentation on the specimen.

Synonyms: *Orectolobus ogilbyi* Regan, 1909: 529. New name for *Orectolobus dasypogon* Ogilby and McCulloch, 1908: 272, pl. 43, fig. 1. Syntypes: Two specimens from Torres Strait and Samarai, Papua-New Guinea, including one 1210 mm long, according to Ogilby and McCulloch. Eschmeyer (1998: CD-ROM) identified one of these as Australian Museum, Sydney, AMS I.5405.

Other Combinations: *Orectolobus dasypogon* (Bleeker, 1867).

FAO Names: En - Tasselled wobbegong; Fr - Requin-tapis barbu; Sp - Tapicero barbudo.

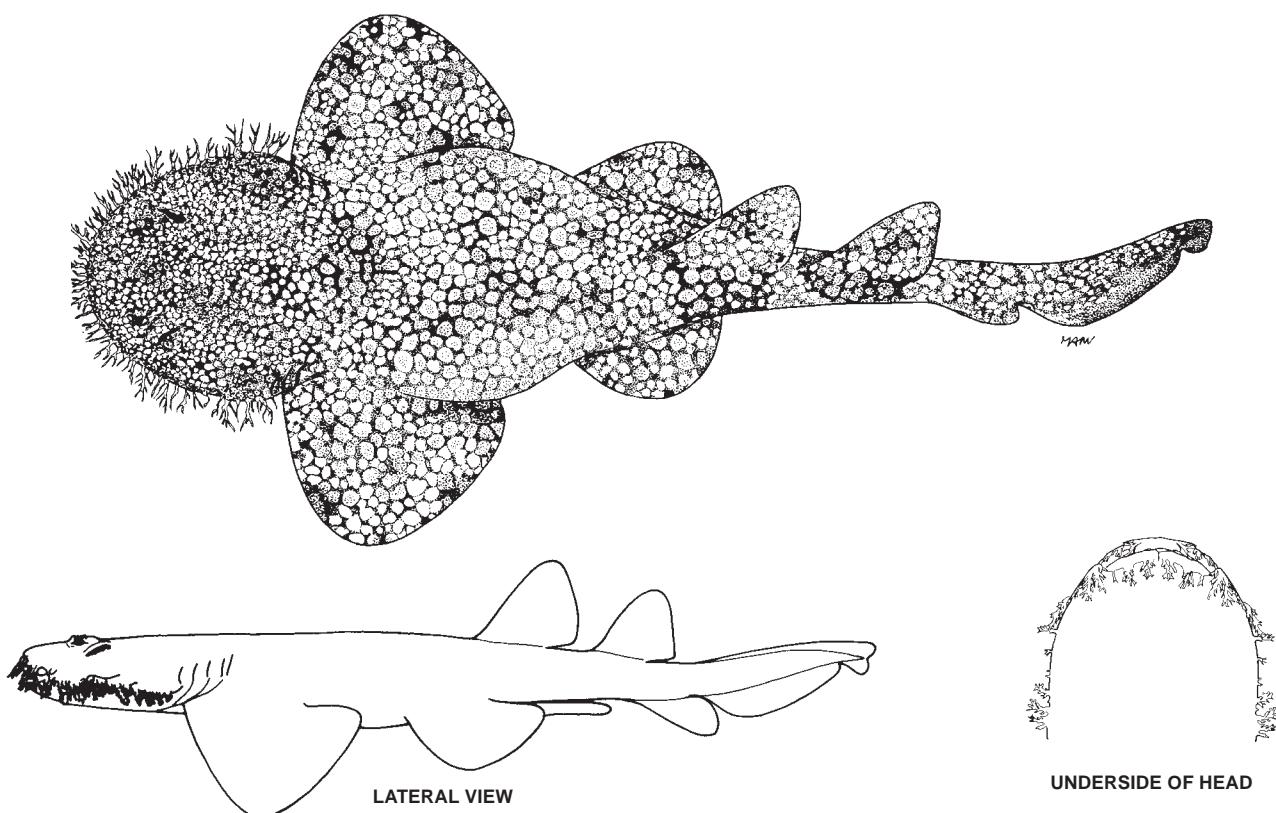


Fig. 113 *Eucrossorhinus dasypogon*

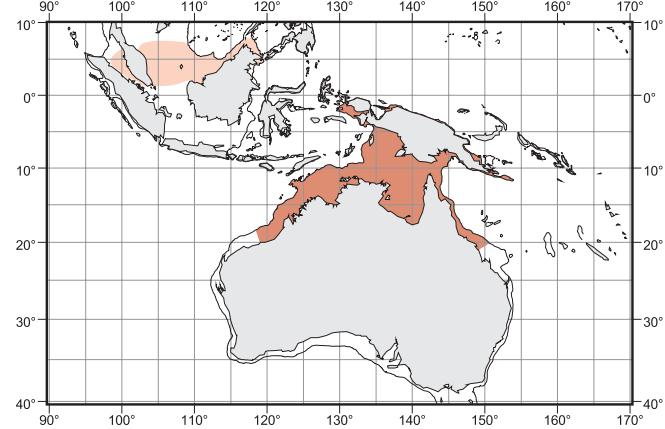
Field Marks: This squat, broad, angler-like shark is unmistakable, with profuse, highly branched dermal lobes on its head, a beard of similar lobes on its chin, and reticulated colour pattern of narrow dark lines and dark spots at their junctions on a light background. It is also recognizable by having its mouth in front of eyes, a symphysial groove on chin, very broad pectoral and pelvic fins, two spineless dorsal fins and an anal fin, the first dorsal-fin origin opposite the pelvic-fin hindbases, and the anal-fin origin well behind the second dorsal-fin origin.

Diagnostic Features: See genus *Eucrossorhinus* above.

Distribution: Western South Pacific: Indonesia (Waigeo, Aru), New Guinea, Malaysia?, northern Australia (northern Queensland, Northern Territory, Western Australia).

Habitat: A little-known inshore and offshore tropical bottom shark, present inshore and on coral reefs, commonly seen on coral heads, and in reef channels and reef faces. Michael (1993) suggested that this species was an obligate coral-reef dweller.

Biology: Commonly seen on the northern Great Barrier Reef; rests on the bottom with its tail curled. This nocturnal species is said to be a faster swimmer than other wobbegongs (Whitley and Pollard, 1980), but its more flattened shape, exquisite camouflage, and bushy dermal flaps suggests the reverse, that it might be more sluggish than other wobbegongs. It is thought to be solitary (Michael, 1993), and individuals are seen resting in caves and under ledges in the day, but may leave their retreats at night to feed. Individuals apparently have a small home range and several retreats within it. Probably ovoviparous, though reproductive biology is little known. Feeds on bottom fishes and possibly invertebrates, and is known to eat nocturnal teleost fishes such as squirrelfish and soldierfish (Holocentridae) and sweepers (Pempheridae) that share their caves.



Size: Maximum said to be 366 cm but this is uncertain and thought by Last and Stevens (1994) to be incorrect; maximum reliably to 125 cm. Born at about 20 cm; the 215 mm possible syntype in the British Museum (Natural History) is newborn or close to it. Reaches 125 cm; an adult male from New Guinea with calcified claspers and examined by the writer (see above) was only 117 cm long.

Interest to Fisheries and Human Impact: Interest to fisheries uncertain and probably minimal; the tough skin with its handsome reticulated colour pattern is occasionally used for leather.

According to an informant quoted by Whitley (1940), this shark "...attacks and generally kills the natives" in Papua-New Guinea, but this is questionable. This shark no doubt should be treated with respect like other wobbegongs, but its fearsome reputation may be greatly exaggerated and may well evaporate as its biology becomes better known. Divers commonly approach and photograph the tasselled wobbegong during the daytime, without inciting agonistic behaviour, though probably stepping on or near this well-camouflaged shark might cause it to bite at least in self-defence or by possibly mistaking a human foot for prey. Michael (1993) thought that it was more likely to bite people than other wobbegongs, and has bitten divers without provocation several times. It is kept in aquaria in the United States and probably elsewhere and is viewed by ecotouristic divers in Australia. It makes a spectacular subject for display and photography.

The conservation status of this species is uncertain, but should be of concern because of its limited distribution and habitat on reefs, including poorly protected areas outside Australian territorial waters that are subject to habitat destruction from pollution and bad fishing practices such as dynamiting, netting and poisoning reefs.

Local Names: Bearded wobbegong, Ogilby's wobbegong, Tasselled wobbegong.

Literature: Ogilby and McCulloch (1908); Regan (1908a, c, 1909); Garman (1913); Whitley (1940); Fowler (1941); Marshall (1965); Whitley and Pollard (1980); Compagno (1984); Dingerkus (1986); Last and Stevens (1994).

Orectolobus Bonaparte, 1834

Genus: Subgenus *Orectolobus* Bonaparte, 1834, *Iconog. Fauna Italica*, 3, *Pesci*, fasc. 7. (Genus *Scylium* Cuvier, 1816).

Type Species: *Squalus barbatus* Gmelin, *in Linnaeus and Gmelin*, 1788, by subsequent restriction of Gill, 1896, *Proc. U. S. Natl. Mus.* 18(1057): 211; a junior synonym of *Squalus maculatus* Bonnaterre, 1788.

Number of Recognized Species: 5.

Synonyms: Genus *Crossorhinus* Müller and Henle, 1837a: 113. Type species: *Squalus lobatus* Bloch and Schneider, 1801, by monotypy. Genus *Chrossorhinus* (Müller and Henle) Smith, 1837: 86; Smith, 1838: 73. Type species: *Squalus lobatus* Bloch and Schneider, 1801, by monotypy. Error or emendation for *Crossorhinus* Müller and Henle, 1837.

Diagnostic Features: Head narrow, its greatest width about equal to or less than distance from snout tip to first gill openings. Chin smooth, without a beard of dermal lobes. Dermal lobes of sides and front of head small, short, unbranched or slightly branched, and in 3 to 10 pairs, forming isolated groups that are broadly separated from one another. Nasal barbels simple and unbranched or with a weak basal branch. Mouth narrow, width about 9% of total length. Dorsal surface of head, body and precaudal tail, and dorsal fin bases smooth or with small inconspicuous tubercles or low longitudinal ridges, not noticeably warty. Trunk moderately broad, width across pectoral-fin insertions considerably less than head length. Precaudal tail rather long, distance from pelvic-fin insertion to lower caudal-fin origin much greater than head length. Pectoral and pelvic fins small and widely spaced from each other, distance from pectoral-fin insertions to pelvic-fin origins at least 1.5 times length of pectoral-fin bases and somewhat greater than pelvic-fin lengths from origins to free rear tips. Interspace between first and second dorsal fins usually slightly longer than first dorsal-fin inner margin but slightly shorter in *Orectolobus* sp. A, and varying from over half to about a fifth of first dorsal-fin base. Dorsal fins fairly high and short to moderately long, height of first dorsal fin over three-fourths of its base length, length of first dorsal-fin base less than pelvic-fin length from origin to free rear tip. Origin of first dorsal fin behind midbases of pelvic fins. Dorsal surface with a colour pattern of regular or jagged-edged broad dark saddles separated by light areas with dusky blotches, scattered dark spots or semi-reticulated broad lines, or O-shaped light spots on a dark background; no reticulating narrow lines with spots at their junctions, but broad reticulating lines without spots are present in a few species.

Remarks: The present account of this genus follows Ogilby and McCulloch (1908), Regan (1908a), Whitley (1940), Compagno (1984), and Last and Stevens (1994). As with Compagno (1984), the account is regarded as provisional, with some problems including the status of subspecies in *Orectolobus ornatus*. Also, in Western Australian waters there is a distinct, undescribed species of wobbegong, that is very abundant and resembles *O. ornatus* as well as *Sutorectus tentaculatus* (B. Hutchins, pers. comm.). It is termed *Orectolobus* sp. A by Last and Stevens (1994) and in the present account, and is being described by P. Last, B. Hutchins, and the writer. There is also a record of a member of this genus from Sabah, Borneo (Fowler et al., 1999), based on a dried specimen of *Orectolobus* that is of uncertain placement in the genus. A wobbegong from Japan illustrated by Nakaya and Shirai (1984, pl. 8, fig. B) is identified as *O. ornatus* but may be an undescribed species. Its coloration of broad black rings and reticulations on a yellowish background and reduced saddles is very different from the Australian *O. ornatus* and unlike any other wobbegong.

Key to Species:

1a. Nasal barbels not branched (Fig. 114); dermal lobes of head very broad-based, only 2 or 3 in front of eyes; colour pattern simple, with a few dark spots, dusky mottling, and three large dark, light-edged rounded saddles on back anterior to first dorsal fin ***Orectolobus wardi***

1b. Nasal barbels branched (Fig. 115); dermal lobes narrower-based and more numerous, four or more in front of eyes; colour pattern with elaborate variegated spots and saddles → 2

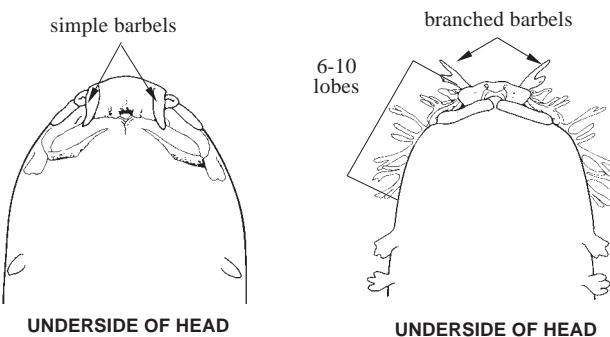


Fig. 114 *Orectolobus wardi* Fig. 115 *Orectolobus maculatus*

2a. About 6 to 10 dermal lobes below and in front of eyes; back dark, with white O-shaped spots and white blotches obscuring darker saddles (Figs 115 and 116) ***Orectolobus maculatus***

2b. About 4 to 6 dermal lobes below and in front of eyes; back with dark colour variegated with light blotches and prominent saddle markings → 3

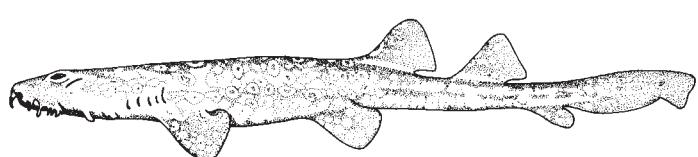
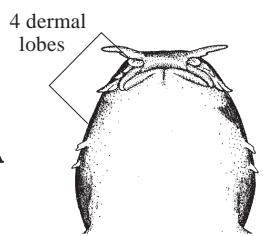


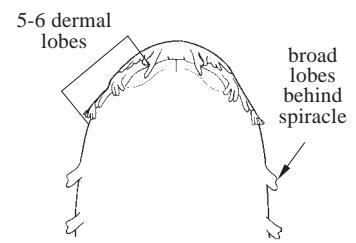
Fig. 116 *Orectolobus maculatus*

3a. About four dermal lobes below and in front of eyes; dermal lobes behind spiracle unbranched and slender; interdorsal space slightly shorter than inner margin of first dorsal fin (Fig. 117) *Orectolobus sp. A*

3b. About 5 or 6 dermal lobes below and in front of eyes; dermal lobes behind spiracle branched, or if unbranched very broad; interdorsal space slightly longer than inner margin of first dorsal fin (Fig. 118) → 4



UNDERSIDE OF HEAD

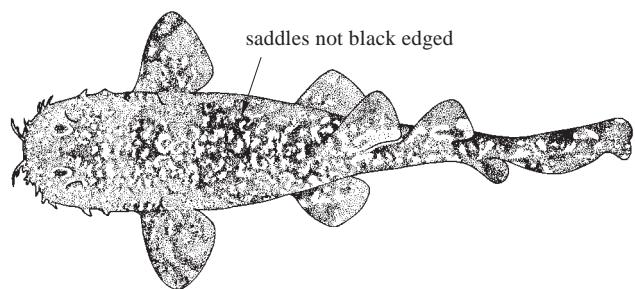
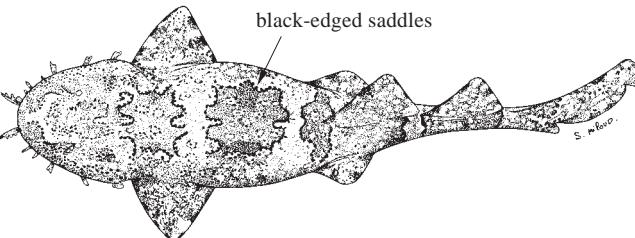


UNDERSIDE OF HEAD

Fig. 117 *Orectolobus sp. A* Fig. 118 *Orectolobus ornatus*

4a. Back with light areas between dark saddles marked with broad reticulated dark lines; borders of saddles dark but not conspicuously black-edged (Fig. 119) *Orectolobus japonicus*

4b. Back with light areas between dark saddles marked with dark, light centred blotches and spots, not reticulated lines; saddles with conspicuous black borders (Fig. 120) *Orectolobus ornatus*

Fig. 119 *Orectolobus japonicus*Fig. 120 *Orectolobus ornatus*

***Orectolobus japonicus* Regan, 1906**

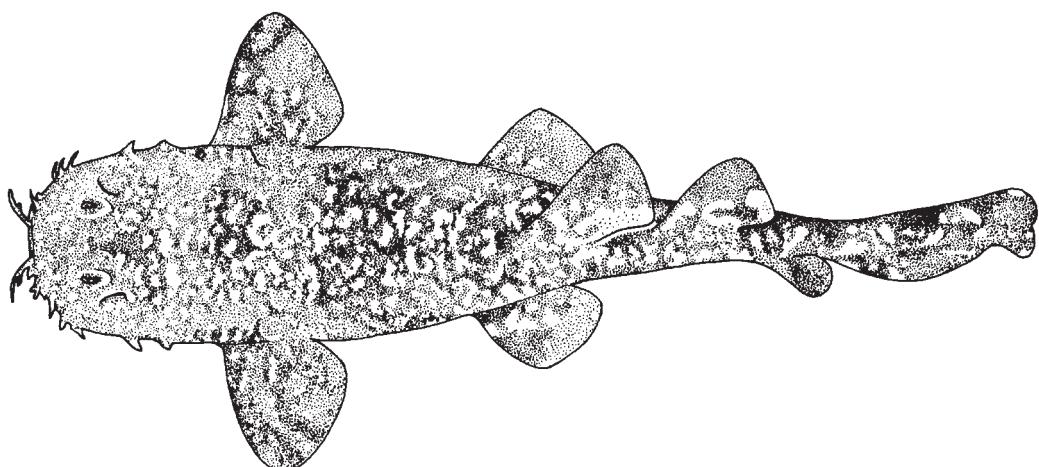
Fig. 121

Orectolobus japonicus Regan, 1906b, Ann. Mag. Nat. Hist. (7), 18(108): 435. Syntypes: British Museum (Natural History), BMNH 1862.11.1.18 and BMNH 1862.11.1.90 according to Eschmeyer (1998, Cat. Fish.: CD-ROM), two females, 1 000 and 780 mm TL, Japan.

Synonyms: None.

Other Combinations: *Crossorhinus* or *Orectolobus barbatus* (not Gmelin, 1788), *Crossorhinus lobatus* (not Bloch and Schneider, 1801).

FAO Names: En - Japanese wobbegong; Fr - Requin-tapis moustache; Sp - Tapicero japonés.

Fig. 121 *Orectolobus japonicus*

Field Marks: Flattened benthic sharks with dermal lobes on sides of head, symphysial groove on chin, very conspicuous variegated colour pattern of broad dark dorsal saddles with light spots and corrugated edges, interspaced with light areas with dark broad reticular lines; also, mouth in front of eyes, long, basally branched nasal barbels, nasoral grooves and circumnarial grooves, two rows of enlarged fang-like teeth in upper jaw and three in lower jaw; first dorsal-fin origin over pelvic-fin bases.

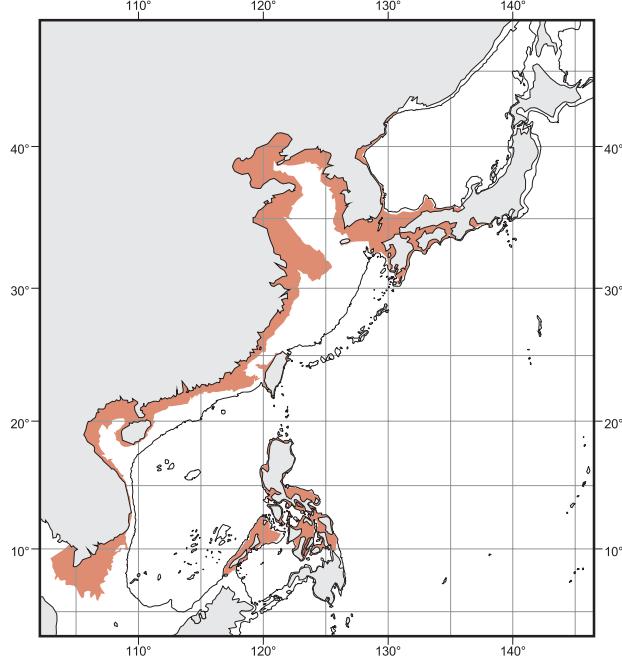
Diagnostic Features: Nasal barbels with a few branches. Five dermal lobes below and in front of eye on each side of head; dermal lobes behind spiracles branched and broad. No dermal tubercles or ridges on back. Interspace between dorsal fins longer than inner margin of first dorsal fin, about half first dorsal-fin base. Origin of first dorsal fin behind midbases of pelvic fins. First dorsal-fin height about equal to base length. **Colour:** colour pattern highly variegated and conspicuous, dorsal surface of body with conspicuous broad, dark rectangular saddles with deeply corrugated margins, dotted with light spots and not ocellate in appearance; interspaces between saddles light, with numerous broad reticulated lines.

Distribution: Western North Pacific: off Japan, Korea, China, Taiwan (Province of China), Viet Nam, and Philippines.

Habitat: A little-known temperate to tropical inshore bottom shark, found on rocky and coral reefs.

Biology: A nocturnal shark, rarely observed by divers. Ovoviparous, with litters of up to 20 to 23 young. In captivity in an aquarium in Okinawa, Japan, gives birth in spring (March through May), and has been observed in courtship. The male grabs the female in the gill area while mating with her. The gestation period is about a year. Eats primarily benthic fish, including lizardfishes (Synodontidae), cutlassfish (Trichiuridae), horse mackerel and other jacks (Carangidae), goatfishes (Mullidae), groupers (Serranidae), tilefishes (Malacanthidae), sea robins (Triglidae), whiting (Sillaginidae), parrotfishes (Scaridae), sea bream (Sparidae), croakers (Sciaenidae), also skates (Rajidae), shark egg-cases, cephalopods, and shrimp.

Size: Maximum uncertain, reaches at least 107 cm. Size at birth 21 to 23 cm; a male was mature at 103 cm; adult females that gave birth in captivity were 101 to 107 cm.



Interest to Fisheries and Human Impact: Interest to fisheries probably limited, caught in set nets in Japan and used for human consumption; also taken in China, Taiwan (Province of China), Korea and Viet Nam. Conservation status uncertain. Probably viewed by ecotouristic divers in Japan, and kept in aquaria in Japan and the United States.

Local Names: Japanese carpet shark, Carpet shark, Bearded shark, Japanese bearded shark, Fringe shark, Kirinotobuka, Oose or Ôse (Japan).

Literature: Ogilby and McCulloch (1908); Regan (1908a); Garman (1913); Fowler (1941); Herre (1953); Lindberg and Legeza (1959); Fourmanoir and Nhu-Nhung (1965); Matsubara (1955); Chen (1963); Masuda, Araga and Yoshino (1975); Uchida (1982); Compagno (1984); Nakaya and Shirai (1984); Uchida, Toda and Kamei (1990); Michael (1993).

Orectolobus maculatus (Bonnaterre, 1788)

Fig. 122

Squalus maculatus Bonnaterre, 1788, *Tabl. Encyclop. Method. Trois Reg. Nat., Ichthyol., Paris*: 8. No type material? Type locality: "La mer du sud".

Synonyms: *Squalus barbatus* Gmelin, in Linnaeus and Gmelin, 1788: 1493. New Holland. On 'barbu' of Broussonet, 1780, *Mem. Acad. Sci. Paris*, 657, no. 7, New Holland. No types known according to Eschmeyer (1998: CD-ROM). *Squalus lobatus* Bloch and Schneider, 1801: 137. On the 'Watt's Shark' of Phillip, 1789: 285, pl. 53. Sydney Cove, Port Jackson, New South Wales, Australia. No types known according to Eschmeyer (1998: CD-ROM). *Squalus appendiculatus* Shaw and Nodder, 1806: pl. 737. Antarctic seas. On the 'Watt's Shark' of Phillip, 1789: 285, pl. 53. Sydney Cove, Port Jackson, New South Wales, Australia. No types known according to Eschmeyer (1998: CD-ROM).

Other Combinations: *Crossorhinus*, *Orectolobus*, *Scyllium*, *Chiloscyllium*, or *Scyliorhinus barbatus* (Gmelin, 1788), *Crossorhinus* or *Crossorhinus lobatus* (Bloch and Schneider, 1801).

FAO Names: En - Spotted wobbegong; Fr - Requin-tapis tacheté; Sp - Tapicero manchado.

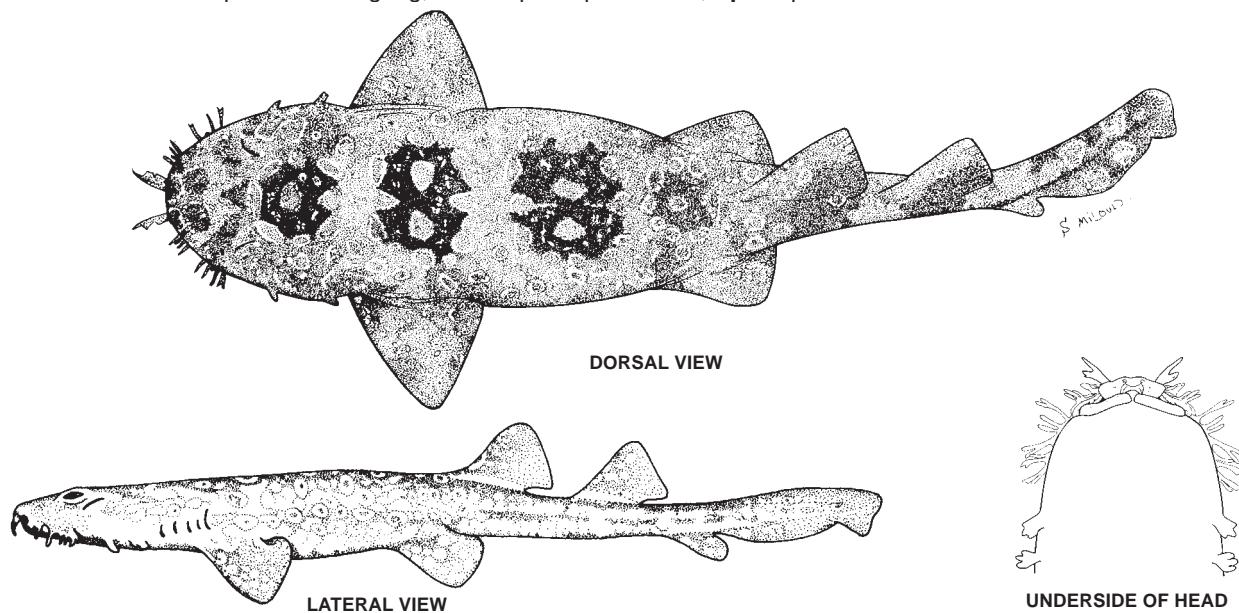


Fig. 122 *Orectolobus maculatus*

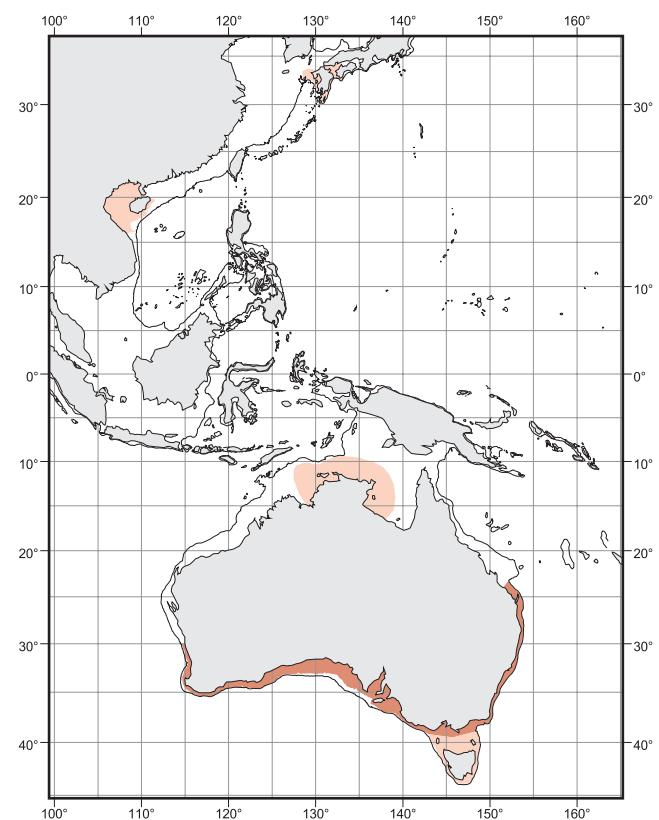
Field Marks: Flattened benthic sharks with dermal lobes on sides of head, symphysial groove on chin; a rather sombre, variegated colour pattern of dark back with obscure darker dorsal saddles and densely covered with prominent light O-shaped spots; also, mouth in front of eyes, long, basally branched nasal barbels, nasoral grooves and circumnarial grooves, two rows of enlarged fang-like teeth in upper jaw and three in lower jaw; first dorsal-fin origin over pelvic-fin bases.

Diagnostic Features: Nasal barbels with a few basal branches. Six to ten dermal lobes below and in front of eye on each side of head; dermal lobes behind spiracles branched and broad. No dermal tubercles or ridges on back. Interspace between dorsal fins longer than inner margin of first dorsal fin, about half length of dorsal-fin base. Origin of first dorsal fin over about last third of pelvic-fin base. First dorsal-fin height about equal to base length. **Colour:** colour pattern variegated but more sombre and less contrasting than most other wobbegongs except *O. wardi*, dorsal surface of body dark with somewhat obscure, broad, darker rectangular saddles with deeply corrugated margins separated by lighter areas, the entire dorsal surface densely spotted with large, O-shaped, light markings; saddles not ocellate in appearance; interspaces between saddles without broad reticulated lines.

Distribution: Western Pacific: South coast of Australia (Western Australia, South Australia, Victoria, New South Wales and southern Queensland, Tasmanian records probably invalid, possibly not Northern Territory). Records from Japan and the South China Sea need confirmation.

Habitat: An abundant, temperate to tropical, inshore to offshore bottom shark of the continental shelves of the western Pacific, occurring in the intertidal down to at least 110 m, commonly on coral and rocky reefs, in coastal bays, in estuaries, in seagrass beds, under piers, and on sandy bottom. It may occur in water barely deep enough to cover it, and has been seen climbing over ridges between tidepools, with its back out of water. Juveniles occur on low reefs, in seagrass beds, and in estuaries. It sometimes makes short trips well above the bottom.

Biology: This shark apparently is sluggish and inactive and is often found motionless on the bottom, at least during the day when it is presumably resting. It often is found in caves, under overhangs on rocky reefs, in channels, and in shipwrecks during the day. It is well camouflaged by its colour pattern and dermal flaps on



rough bottom but is rather conspicuous on sand. This species (and wobbegongs in general) has not been studied to the extent of some nurse sharks (Ginglymostomatidae), but site specificity may be a feature of its behaviour as with nurse sharks: anecdotal accounts suggest that individuals may return to the same site repeatedly. It may occur singly but also occurs in aggregations of a dozen or more. It is said to be nocturnal, and may swim and clamber about the bottom at night looking for food as nurse sharks do. It is not known how important their camouflage patterns are for feeding in this and other wobbegongs. It is uncertain if wobbegongs take a substantial amount of prey that simply blunders into proximity while they sit on the bottom (as shown in a recent video), or if they do so by active prowling and stalking at night. Wobbegongs in the Sydney area, presumably this common species, were observed to slowly sneak up to a bait at night from a considerable distance, as if stalking potential prey like a cat, but this may not be the case with live, uninjured prey.

Ovoviparous, with large numbers of young per litter; one female had 37. There are anecdotal accounts that male wobbegongs from the Sydney area (and presumably this species, which is abundant there) kept in aquaria fight vigorously among themselves while courting females, and that females are bitten by males in the gill region during courtship and one clasper is inserted; in captivity, these wobbegongs copulated in July. A wild male wobbegong was said to be attracted to a female kept in a wired enclosure open to the sea and tried to enter the enclosure during the breeding season; the implication is that the female gave off an attractive stimulus, presumably a chemical pheromone but possibly some other signal.

The spotted wobbegong feeds on bottom invertebrates, including crabs, lobsters and octopuses, bony fishes including sea bass (Serranidae), scorpionfishes (Scorpaenidae) and luderick (Kyphosidae), other nonbatoid sharks including conspecifics, and rays (batoids). Prey items may blunder right up to the mouth of a lurking wobbegong, and even nibble on its tentacles, before being caught and eaten. Apparently the short broad mouth and large broad pharynx of this and other wobbegongs aid them in sucking in prey. Video footage suggests that prey is suddenly sucked into the mouth as the pharynx expands, much as in angel sharks, but the prey is taken in front of the wobbegong rather than above it as in angel sharks (Squatinidae). The powerful jaws and big, modified anterior teeth in the symphyseal region of this and other wobbegongs, with one median and two lateral rows of teeth in the lower jaw that interdigitate with two rows of enlarged lateral teeth in the upper jaw, form an effective trap to impale and kill their prey.

Size: Maximum about 320 cm, but with most individuals smaller, up to 150 to 180 cm. Size at birth about 21 cm. Adult males may mature at about 60 cm long.

Interest to Fisheries and Human Impact: Interest to fisheries limited, utilized for human consumption and for leather; the meat is apparently excellent eating and the skin of this and other wobbegongs is tough and makes an excellent, decorative leather with its handsome patterning. Spotted wobbegongs are commonly caught as bycatch in trawls, beach seines, trammel nets, in lobster pots and traps, and are fished with line gear (droplines) off New South Wales. Some are taken by divers with spears. These sharks are regarded as a pest by lobster fishers, because they are adept at wedging themselves into lobster pots, to eat the catch and bait.

Much has been made of the danger of this and other wobbegongs to people, often to the exclusion of everything else of their life history. This species has been known to bite people that step on it or put their feet near its mouth, and can and will bite when molested or provoked, as when speared or caught by line or nets. These sharks can inflict severe lacerations, and there is one report of a fisher losing his foot to a spotted wobbegong that was disturbed in a rock pool. At least for this species, inflicting fatalities on people is virtually unknown and requires verification in other wobbegongs. The strong jaws and jaw musculature, and (unlike nurse sharks) large and effective impaling teeth of these wobbegongs, coupled with their tendency to hold on after biting, makes them a minor hazard to unwary explorers of tide-pools, fishermen and divers, but the sharks otherwise appear to be relatively unaggressive and sluggish when unprovoked, as when a diver views them underwater. However, placing one's limb near the head of a wobbegong may be inviting trouble, as the shark may bite either from mistaking the limb as a smaller prey item, or in response to being cornered. Several unprovoked and provoked bite incidents on people (including some on divers near the bottom and well above it) by Australian wobbegongs (probably including this species), and even a few cases of wobbegongs biting boats, have been reported in the literature, but it is often difficult to determine which species was involved or what the precise circumstances were that led to the incident. Wobbegongs of all sizes, but especially larger individuals, should be treated with due respect.

This species is displayed in large public aquaria in Europe, the United States, and probably Australia and is viewed by divers in Australia.

Local Names: Wobbegong, Carpet shark, Kumohada-oose or Kumohada-ōse (Japan).

Remarks: Extra-Australian records for this species require confirmation according to Last and Stevens (1998) and in the writer's estimation.

Literature: Ogilby and McCulloch (1908); Garman (1913); Whitley (1940); Fowler (1941); Matsubara (1955); Chen (1963); Garrick and Schultz (1963); Stead (1963); Marshall (1965); Grant (1972); Compagno (1984); Nakaya and Shirai (1984); Michael (1993); Last and Stevens (1994).

Orectolobus ornatus* (De Vis, 1883)*Fig. 123**

Crossorhinus ornatus De Vis, 1883, *Proc. Linn. Soc. New South Wales* (1884), 8(2): 289, Mar. 28, 1883. Holotype: Type specimens not mentioned by De Vis but the holotype is Queensland Museum, QM I.164 (dry mount) according to Eschmeyer (1998, *Cat. Fish.*: CD-ROM), type locality, "Moreton Bay, etc.", Queensland.

Synonyms: *Orectolobus devisi* Ogilby, 1916: 181. Unnecessary replacement name for *Crossorhinus ornatus* De Vis, 1883, presumed by Ogilby to be preoccupied by Bonaparte's (1834) inclusion of *Scyllium ornatum* Gray, 1832 (= *Chiloscyllium plagiosum*) in his new genus *Orectolobus*. Holotype: Queensland Museum, QM I.164 (dry mount) according to Eschmeyer (1998: CD-ROM). *Orectolobus ornatus halei* Whitley, 1940: 81, figs 70-71. Holotype: South Australian Museum, Adelaide, SAMA 2 883 mm TL female (cast), not found in 1997 according to Eschmeyer (1998: CD-ROM), St. Vincent Gulf, South Australia.

Other Combinations: *Crossorhinus barbatus* (not Gmelin, 1788).

FAO Names: En - Ornate wobbegong; Fr - Requin-tapis paste; Sp - Tapicero ornamentado.

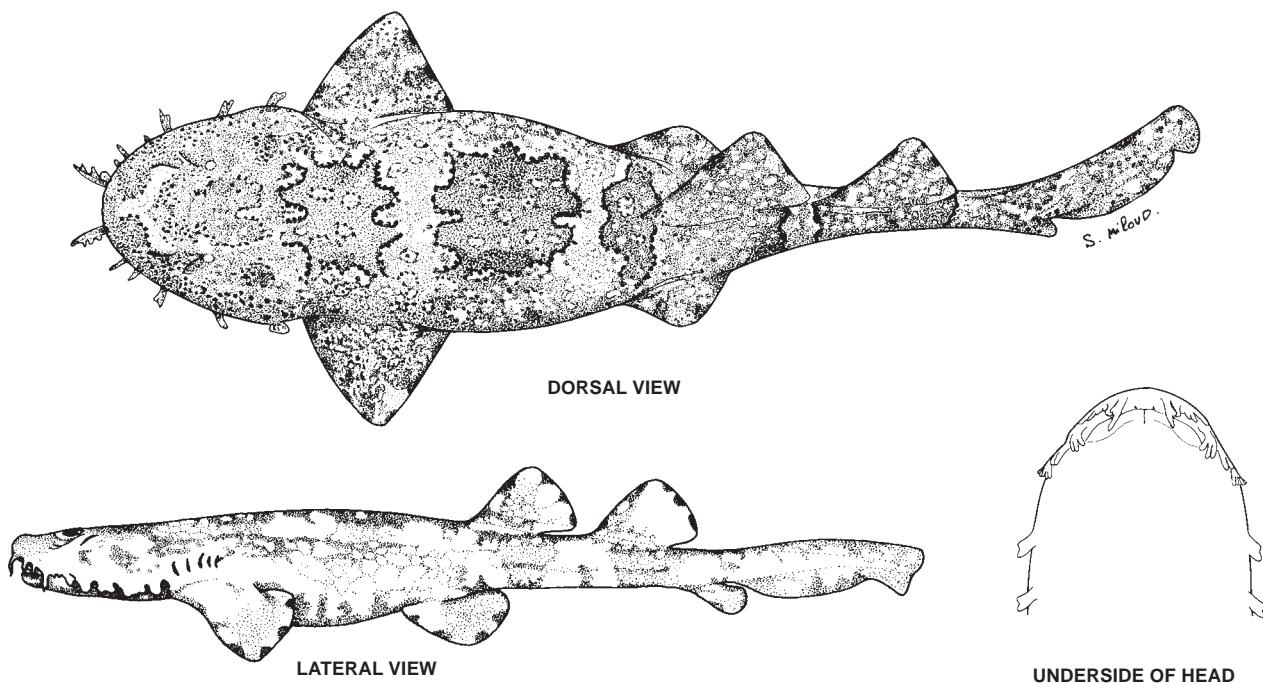


Fig. 123 *Orectolobus ornatus*

Field Marks: Flattened benthic sharks with dermal lobes on sides of head, symphysial groove on chin; a strongly contrasting, variegated colour pattern of conspicuous broad dark, dorsal saddles with light spots and conspicuous black, corrugated edges, interspaced with lighter areas and conspicuous dark, light-centred spots; also, mouth in front of eyes, long, basally branched nasal barbels, nasoral grooves and circumnarial grooves, two rows of enlarged fang-like teeth in upper jaw and three in lower jaw; first dorsal-fin origin over pelvic-fin bases.

Diagnostic Features: Nasal barbels with a few branches. Five dermal lobes below and in front of eye on each side of head; dermal lobes behind spiracles unbranched or weakly branched and broad. No dermal tubercles or ridges on back. Interspace between dorsal fins longer than inner margin of first dorsal fin, about half first dorsal-fin base. Origin of first dorsal fin over about last third of pelvic-fin base. First dorsal-fin height about equal to base length. **Colour:** colour pattern very conspicuous and highly variegated, dorsal surface of body with conspicuous broad, dark rectangular saddles with deeply corrugated, prominent black-edged margins, dotted with light spots and not ocellate in appearance; interspaces between saddles light, with numerous broad light-centred dark blotches.

Distribution: Western Pacific: ?Japan, Indonesia, New Guinea, and tropical and warm-temperate Australia (Queensland, New South Wales, Victoria, South Australia, south coast of Western Australia; absent from Tasmania, northern Western Australia and Northern Territory).

Habitat: A common inshore bottom shark of continental waters, found in bays, on alga-covered rocky areas and coral reefs on the coast and around offshore islands, in lagoons, on reef flats and faces, and in reef channels. Favours clearer water than does the spotted wobbegong. Occurs from the intertidal to at least 100 m depth.

Biology: This is a nocturnal shark, that rests on the bottom during the day in caves, under ledges on reefs, and in trenches, and prowls on its reef habitat at night. It is observed singly and often in aggregations during the day, sometimes with several animals piled on top of one another. Ovoviparous, with litter of at least 12 young. Feeds on bony fishes, sharks, rays, cephalopods, and crustaceans.

Size: Maximum about 288 cm. Size at birth about 20 cm. Normally maturing at about 175 cm but a Queensland male was mature at 63 cm (suggesting the possibility of more than one species included under this taxon).

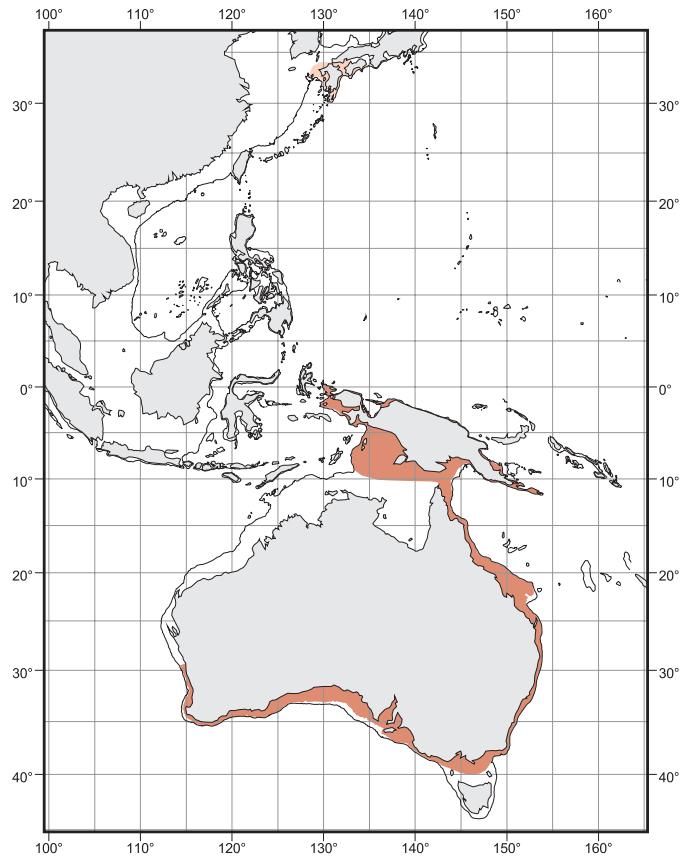
Interest to Fisheries and Human Impact: Interest to fisheries limited, fished as bycatch of commercial shark fisheries off Western Australia and taken by dropline off New South Wales. Flesh marketed but of little commercial value at present. Skin very tough and attractively patterned, and occasionally used for making a good leather. Said to bite waders and fishers in tidepools and occasionally biting divers. Michael (1993) suggests that large males of this species may be more aggressive during the breeding season. Sometimes they may swim off the bottom and approach a nearby diver, possibly as an agonistic response. This species is kept in public aquaria in the United States and probably Australia. Conservation status uncertain, but of concern in places outside Australian territorial waters where it is found in places subjected to habitat degradation and uncontrolled fisheries.

Local Names: Gulf wobbegong, Banded wobbegong, Carpet shark, Karakusa-ōse (Japan).

Remarks: Whitley (1940) proposed a subspecies, *O. ornatus halei*, for the ornate wobbegongs from South Australia, separable from *O. o. ornatus* of more northeastern waters by differences in its colour pattern and in the dermal flaps of the head. It remains to be seen at what level these apparent differences can be recognized.

Extra-Australian records for this species (Masuda, Araga and Yoshino, 1975; Nakaya and Shirai, 1984, for Japan) require confirmation (Last and Stevens, 1994; see also discussion above).

Literature: Ogilby and McCulloch (1908); Garman (1913); Whitley (1940); Stead (1963); Marshall (1965); Grant (1972); Masuda et al. (1975); Compagno (1984); Nakaya and Shirai (1984); Michael (1993); Last and Stevens (1994).



***Orectolobus wardi* Whitley, 1939**

Fig. 124

Orectolobus wardi Whitley, 1939, Rec. Australian Mus., 20: 264. Holotype: Australian Museum, Sydney, AMS-IA-7784, Cape Keith, Melville Island, northern Australia.

Synonyms: None.

Other Combinations: None.

FAO Names: En - Northern wobbegong; Fr - Requin-tapis savetier; Sp - Tapicero zapatilla.

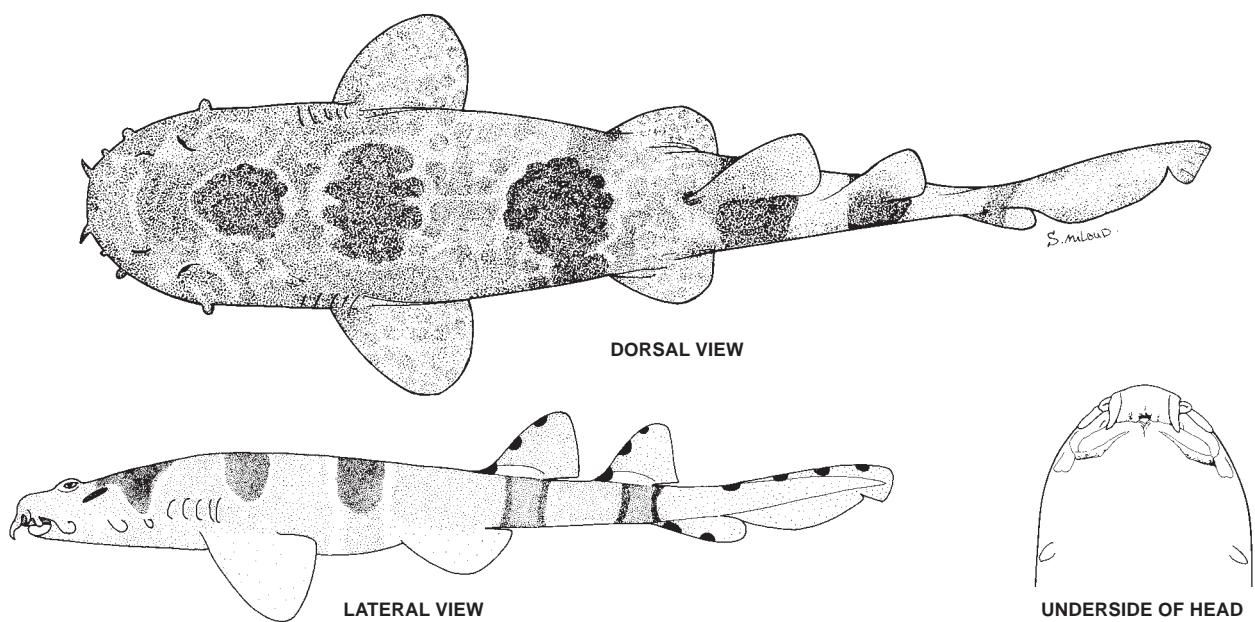


Fig. 124 *Orectolobus wardi*

Field Marks: Flattened benthic sharks with dermal lobes on sides of head, symphysial groove on chin, variegated but rather sombre colour pattern of rounded, ocellate dark dorsal saddles with entire edging and light margins, interspaced with broad dusky areas without spots or reticular lines; also, mouth in front of eyes, long, basally branched nasal barbels, nasoral grooves and circumnarial grooves, two rows of enlarged fang-like teeth in upper jaw and three in lower jaw.

Diagnostic Features: Nasal barbels without branches. Two dermal lobes below and in front of eye on each side of head; dermal lobes behind spiracles unbranched and broad. No dermal tubercles or ridges on back. Interspace between dorsal fins longer than inner margin of first dorsal fin, about half first dorsal-fin base. Origin of first dorsal fin over about last fourth of pelvic-fin base. First dorsal-fin height about equal to base length. **Colour:** colour pattern variegated but dull and sombre compared to most other wobbegongs, dorsal surface of body with small, rounded, ocellate, light-edged saddle marks with entire margins, separated from each other by broad, dusky spaces without spots or broad reticulated lines.

Distribution: Western South Pacific: Confined to Australian waters (Queensland, Northern Territory and Western Australia).

Habitat: A little-known but possibly common tropical inshore bottom shark of the Australian northern continental shelf. Occurs on shallow-water reefs in water less than 3 m deep, often in turbid areas.

Biology: A nocturnal shark, inactive during the day, sometimes seen with its head under a ledge. Probably ovoviparous. Presumably feeds on bottom invertebrates and fishes, but diet unrecorded.

Size: Maximum to at least 63 cm and possibly 100 cm; a 45 cm male was mature.

Interest to Fisheries and Human Impact: Interest to fisheries none at present. Conservation status unknown.

Local Names: Northern wobbegong, North Australian wobbegong.

Literature: Whitley (1939, 1940); Marshall (1965); Compagno (1984); Michael (1993); Last and Stevens (1994).

