

NEW AUSTRALIAN FISHES. PART 20.
A NEW SPECIES OF *APLODACTYLUS* (APLODACTYLIDAE)

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Abstract

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Aplodactylus westralis sp. nov., from south-western Australia, is described. It is separable from other species of *Aplodactylus* by the following combination of characters: lanceolate teeth, distinctly convex interorbital space, obtuse head profile, and reticulate pattern of pale markings on the body and fins.

Introduction

The family Aplodactylidae presently contains four species belonging to two nominal genera: *Crinodus lophodon* (Günther) from New South Wales; *Aplodactylus arcidens* Richardson from New Zealand, Victoria, South Australia and Tasmania; *A. etheridgii* (Ogilby) from north-eastern New Zealand, Kermadec Islands, Lord Howe Island, Norfolk Island, New South Wales and Victoria; and *A. punctatus* (Valenciennes) from Chile and Peru. An additional species, *Aplodactylus westralis* sp. nov., collected from south-western Australia is described herein.

In the following description, morphological values for the holotype are presented first and ranges for the paratypes follow in parentheses. Type specimens are deposited in the Australian Museum, Sydney (AMS) and the Western Australian Museum, Perth (WAM).

Aplodactylus westralis sp. nov.

Figure 1

- Crinodus lophodon*.—Mecs, 1960: 16 (non Günther).
Dactylosargus arcidens.—Hutchins, 1979: 62, 97, pl. 47 (non Richardson).
Dactylosargus sp.—Hutchins & Thompson, 1983: 48, 83, fig. 216.
Aplodactylus sp. Hutchins & Swainston, 1986: 78, 135, fig. 414.

Material examined. Holotype: Western Australia, Canal Rocks, Cape Naturaliste (33°40'S, 115°00'E), speared by B.C. Russell, 1 Apr 1978, AMS 1.20233-012 (325 mm SL).

Paratypes (5 specimens): Western Australia, Wilsons Inlet (35°00'S, 117°20'E), B.J. Allen, 31 Dec 1959, WAM P4728-001 (235 mm SL); Cheynes Beach (34°35'S, 118°46'E), P. Ewers, May 1972, WAM P21799-001 (300 mm SL); Busselton (33°39'S, 115°00'E), netted by J.S. Blue, Nov 1963, WAM P5877-001 (530 mm SL); Geographe Bay (33°37'S, 115°18'E), speared Sep 1977, WAM P25931-001 (347 mm SL); Fremantle (32°03'S, 115°44'E), handlined, Sep 1977, WAM P25930-001 (335.2 mm SL).

Diagnosis. Dorsal-fin rays XVIII,18 (XVII,18-XVIII,19); anal-fin rays III,7; pectoral-fin rays i,14 (i,13-14); lateral-line scales 96 (92-100); gill rakers 6+15 (7-9+14-18); vertebrae 16+18; epipleural ribs on first 13 (11) vertebrate.

Body elongate, greatest depth 3.9 (3.7-4.7) in SL; greatest width 5.7 (5.4-7.6) in SL; head length 4.4 (4.3-4.5) in SL; snout short, 2.7 (2.6-2.8) in head; dorsal profile of head obtusely angled in front of eye, snout and nape subtending an angle of about 135°; orbital diameter 5.9 (4.8-6.5) in head; interorbital space convex medially, least width of interorbital 4.2 (3.6-4.5) in head; least depth of caudal peduncle 1.9 (1.9-2.4) in head; peduncle length 2.3 (2.0-2.6) in head; base of dorsal fin long, with elongate notch between spinous and soft parts of fin, basal length of soft dorsal fin 1.3 (1.2-1.4) in length of spinous part; anal fin short, basal length 2.0 (2.0-2.5) in head; pectoral-fin length 1.1 (1.1-1.2) in head, ventralmost 6 (5-6) rays simple, fleshy; pelvic-fin length 1.3 (1.3-1.5) in head, rays fleshy.

Mouth small, somewhat ventral on head; lips fleshy, upper lip projecting, maxilla reaching a

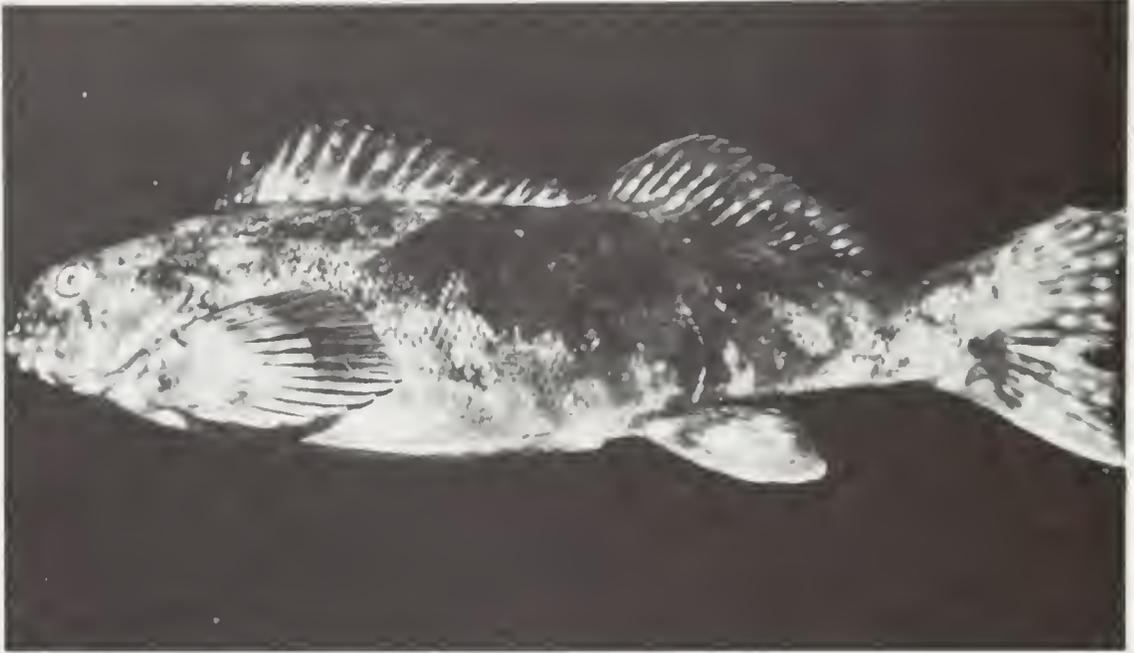


Fig. 1. *Aplodactylus westralis* sp. nov., holotype, 325 mm SL, AMS I.20233-012.

vertical through posterior nostril; teeth small, lanceolate, in 5-6 rows in jaws, outermost row of teeth largest; tiny crescent-shaped patch of vomerine teeth; two pair of nostrils, anterior pair with fleshy tentaculate flaps on anteroventral margin and posteroventral margin; opercle with broad flat spine which does not extend to the fleshy margin; scales small, eyeloid, embedded, extending onto cheeks and opercles, and forming a sheath along base of spinous dorsal fin.

Colour when fresh: body brown or slatey-grey, with 6 dark saddles above lateral line, these giving way below to irregular bars that extend to ventral midline; interspaces between saddles and bars pale brown or whitish (some specimens with interspaces reduced or coalesced to form pale mottles); numerous pale brown or whitish spots, about diameter of pupil, mostly on head and unpaired fins. Pattern on body fades quickly on capture, and colour in alcohol is dark brownish with paler mottling and spots. Some specimens with black blotch on opercle near posterodorsal margin.

Distribution. Western Australia, from Rottneet Island to Twilight Cove, Great Australian Bight (B.

Hutchins, pers. comm); South Australia, Stenhouse Bay, York Peninsula (B. Hutchins, pers. comm). Common in weedy reef areas down to about 20 m.

Etymology. *Westralis*, alluding to its distribution in south-western Australia.

Remarks. *Aplodactylus westralis* has previously been misidentified in Western Australia as *Crinodus lophodon* (Mees, 1960) and as *Dactylosargus* (= *Aplodactylus*) *arctidens* Hutchins, 1979). It closely resembles *C. lophodon* in colour pattern but the monotypic *Crinodus* is separable from species of *Aplodactylus* by its 2-3 rows of jaw teeth (versus 5-6 rows in *Aplodactylus*), its lack of vomerine teeth, and its larger scales (lateral-line scales 72-74, versus 80 in *Aplodactylus*). Other Australian species of *Aplodactylus* are readily distinguishable from *A. westralis* on the basis of colour pattern: *A. arctidens* has a reticulate pattern of pale markings on the body and fins; while *A. ethieridgii* has numerous small spots (less than diameter of pupil) over the entire body.

Aplodactylus westralis can also be separated from other Australian species of the genus in having lanceolate teeth (versus multicuspid in *A. etheridgii*, and tricuspid in *A. arctidens*), a distinctly convex interorbital space (versus concave in *A. etheridgii*), and a distinctly obtuse head profile (versus more evenly rounded in *A. arctidens*).

This species was illustrated in colour by Hutchins (1979: pl. 47) and Hutchins and Swainson (1986). Hutchins and Thompson (1983: fig. 216).

References

- Hutchins, B., 1979. *A Guide to the Marine Fishes of Rottnest Island*. Creative Research: Perth.
- Hutchins, B. and Swainson, R., 1986. *Sea Fishes of Southern Australia*. Swainston Publishing: Perth.
- Hutchins, B. and Thompson, M., 1983. *The Marine and Estuarine Fishes of South-western Australia*. Western Australian Museum: Perth.
- Mees, G.F., 1960. Additions to the fish fauna of Western Australia-2. *Fisheries Department, Western Australia, Fisheries Bulletin* 9(2): 13-21.