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VICTORIAN SPECIES OF THE GENUS *GALAXIAS*,
WITH DESCRIPTIONS OF TWO NEW SPECIES.

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McCulloch (1929, p. 47) listed six species of the genus *Galaxias* as occurring in Victoria. The names of two of these are here consigned to the already extensive synonymy of *G. attenuatus* and three other species are added, making in all seven species now known from Victoria. Of the additional forms two are described as new, and *G. planiceps*, previously known only from New South Wales, is recorded from this State.

Requests for information on the smaller fishes inhabiting streams and lakes are frequent, and it is hoped that the following key and notes under each species will prove useful to those interested. So far, indigenous fresh-water fishes have received little attention; every effort is made to keep up the stock of introduced Salmonidae; European Perch (*Perca fluviatilis*) and the Gold Fish (*Carassius auratus*) are abundant everywhere; and, possibly as a result, the numbers of native fishes are diminishing.

Key to Victorian Species.

Ventrals 7-rayed.

Origin on anal opposite to that of dorsal *attenuatus* (Jenyns)

Origin of anal posterior to that of dorsal.

Anal origin below or in advance of middle of dorsal.

Anal when adpressed extending to or almost to base of caudal.

Sides of body with irregular-shaped dark spots and blotches

corii Macleay

Anal when adpressed not nearly extending to base of caudal.

Jaws equal anteriorly.

Sides of body with round black spots *truttaceus* (Cuvier)

Lower jaw projecting.

No body markings *planiceps* Macleay

Anal origin behind middle of dorsal.

Maxillary extending to below anterior 1/3 of eye; caudal slightly emarginate.

Sides of body with dark vertical bars and blotches

ornatus Castelnau

Maxillary extending to below middle of eye; caudal deeply emarginate.

Sides of body with 3 or 4 large dark oval blotches *fuscus* n.sp.

Ventrals 5-rayed.

Origin of anal in advance of that of dorsal *pusillus* n.sp.

Galaxias attenuatus (Jenyns).

Mesites attenuatus Jenyns, Zool. Voy. Beagle, iii, 1842, p. 121, pl. 22, fig. 5.

Austrocobitis attenuatus Ogilby, Proc. Linn. Soc. New South Wales, xxiv, 1899, p. 158.

Galaxias attenuatus Regan, Proc. Zool. Soc., 1905, ii (1906), p. 368, pl. 12, fig. 1, and pl. 13, fig. 2.

Galaxias versicolor Castelnau, Proc. Zool. Acclim. Soc. Vict., i, 1872, p. 176.

Galaxias amaenus Castelnau, *ibid*, p. 178.

This is the common and most widely distributed species of the Galaxiidae. It occurs in the extreme south of South America, the Falkland Islands, New Zealand, southern Australia, and Tasmania. It is the only form in Australia that is known to enter the sea. The life-history of *attenuatus* has received considerable attention in New Zealand, where it forms the bulk of the commercially valuable whitebait.

It is evident from the original descriptions of *G. amaenus* and *G. versicolor* that both were described from small specimens of *attenuatus*.

Galaxias coxii Macleay.

Galaxias coxii Macleay, Proc. Linn. Soc. New South Wales, v, 1880, p. 45; Regan, Proc. Zool. Soc., 1905, ii (1906), p. 380, pl. 12, fig. 2.

Galaxias nigothoruk Lucas, Proc. Roy. Soc. Vict. (2), iv, 1892, p. 28.

In Victoria this species appears to be confined to the mountainous country east of Port Phillip Bay. Some of the largest specimens in the collections of the National Museum, measuring up to 190 mm. in total length, were obtained in Lake Tali-Karng, near the top of Mount Wellington (5,363 ft.). This lake or tarn has been formed by a landslip and has no visible outlet.

A feature of the colouration of this species is a large dark blotch immediately above the base of each pectoral fin.

G. affinis Regan from Tasmania is very doubtfully distinct from *G. coxii*.

Galaxias truttaceus (Cuvier).

Esox truttaceus Cuvier, Regn. Anim., ed. 1, ii, 1817, p. 184.

Galaxias ocellatus McCoy, Intercol. Exhib. Ess. No. 7, 1866, p. 14.

Next to *G. attenuatus* this is the most common species of the genus in Victoria. It is readily recognized by the trout-like black spots on the sides of the body.

ventrals. Ventrals originating at a point about equidistant between snout and base of caudal, extending half the distance from their base to origin of anal. Caudal emarginate, 7.6 in total length; its length equal to length of caudal peduncle which is twice as long as deep.

Colour in spirit greenish-brown, with four prominent dark oval blotches on each side between base of pectoral and origin of dorsal.

Described from a specimen (A.96, Nat. Mus. Victoria) measuring 84 mm. in total length, one of two examples from the Rubicon River, Victoria.

Galaxias pusillus sp. nov.

B.5 or 6; D.8 (7-8); A.10 (9-10); V.5; P.12 (10-12); C.13.

Head 5.1, depth of body 7.5, in total length. Snout less than diameter of eye, 4 in head. Eye equal to interorbital width, 3 in head. Jaws equal or the lower slightly projecting, maxillary extending to vertical from anterior margin of eye. Gill-rakers long, slender, about 10 on lower part of anterior arch. Teeth in jaws subequal.

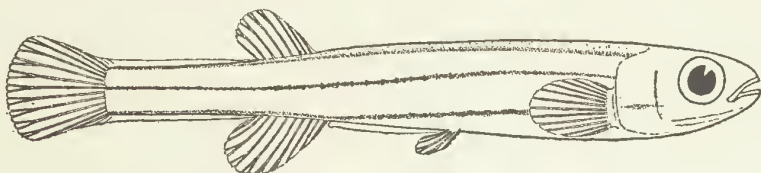


FIG. 2. *GALAXIAS PUSILLUS* sp. nov.

Distance from origin of dorsal to base of caudal about 3.6 in total length. Origin of anal in advance of that of dorsal, posterior end of base of anal directly below that of dorsal. Pectoral extending slightly more than half the distance from its base to base of ventral. Ventrals originating at a point a little nearer the snout than base of caudal, extending one-third the distance from their base to origin of anal. Caudal rounded, its length equal to depth of body, 7.5 in total length. Caudal peduncle three times as long as deep.

Colour in spirit pale yellowish with three longitudinal black lines on sides of body.

Described from a specimen (A.97, Nat. Mus. Victoria) measuring 31 mm. in total length, one of a small series from Cardinia Creek, about 30 miles east of Melbourne, Victoria, obtained by Mr. A. Massola. Mr. Massola and other members of the Aquarium Society of Victoria have been successful in breeding these attractive little fishes in aquaria.

In having 5-rayed ventrals, and the anal originating in front of the dorsal, this species agrees with *Galaxias bullocki* Regan from Chile and differs from all other species of the genus. On these characters Eigenmann (1924, p. 49) proposed *Brachygalaxias* for *G. bullocki*, but a separate genus does not seem warranted.

REFERENCES.

- McCulloch, A. R., 1929.—A Check-list of the Fishes recorded from Australia. Mem. Aust. Mus., v.
Eigenmann, C. H., 1924.—The Fresh-water Fishes of Chile. Mem. Nat. Acad. Sciences, xxii, No. 2.

Galaxias planiceps Macleay.

Galaxias planiceps Macleay, Proc. Linn. Soc. New South Wales, vi, 1881, p. 233.

Galaxias waitii Regan, Proc. Zool. Soc., 1905, ii (1906), p. 376, pl. 11, fig. 2.

The receipt of specimens from near Goorambat, about 30 miles south of the Murray River, enables me to add this species to the Victorian list. Local interest was aroused when examples appeared in road-side drains after heavy rain. A female, 72 mm. in total length and greatly distended with ova, was received on July 29, 1936. In Victoria it is probable that this species is confined to the Murray River and its tributaries.

Galaxias ornatus Castelnau.

Galaxias ornatus Castelnau, Proc. Zool. and Acclim. Soc. Vict., ii, 1873, p. 153; Regan, Proc. Zool. Soc., 1905, ii (1906), p. 381.

Galaxias findlayi Macleay, Proc. Linn. Soc. New South Wales, vii, 1882, p. 107; Regan, Proc. Zool. Soc., 1905, ii (1906), p. 382, pl. 13, fig. 3.

Most species of the genus in Australia exhibit considerable variation due possibly to various factors such as age, or the effect of prevailing conditions on growth. The slight differences between *ornatus* and *findlayi* appear to be no more than variation within the species, and this would account for the fact that *ornatus* has not been recognized since it was described, all specimens being referred to *findlayi*.

Examples of the species as here defined, from various localities in eastern Victoria, are in the collections of the National Museum.

Galaxias fuscus sp. nov.

B.8; D.12; A.12; V.7; P.15; C.18.

Head, 5.6, depth of body, 8.4, in total length. Snout longer than diameter of eye, 3.7 in head. Eye 1.5 in interorbital width and 4.2 in head. Jaws equal, maxillary extending to below middle of eye. Gill-rakers short, slender, 9 on lower part of anterior arch. Teeth in jaws subequal.

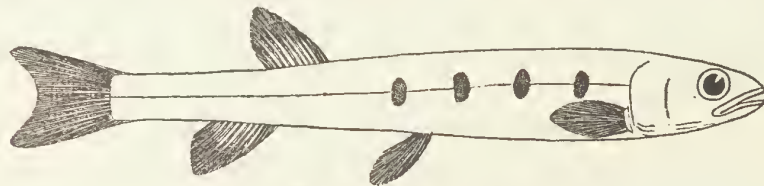


FIG. 1. *GALAXIAS FUSCUS* sp. nov.

Distance from origin of dorsal to base of caudal 3.5 in total length. Anal commencing slightly in advance of the vertical from posterior end of base of dorsal. Pectoral extending two-fifths the distance from its base to base of