

iii. On the Systematics and Natural Distribution of the Climbing Perch, *Anabas oligolepis* Bleeker, 1855 (Osteichthyes : Anabantidae)

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Anabas oligolepis was described by Bleeker (1855) from Borneo. Subsequently he (1879) described three species of *Anabas*: *oligolepis*, *testudineus* and *microcephalus* based on differences in body proportions and lateral line scales, but was doubtful about the latter species. Gunther (1861) recognized four species: *scandens*, *macrocephalus*, *oligolepis* and *microcephalus*. Day (1878) and Regan (1909) recognized only one species, *A. scandens*. Weber and de Beaufort (1922) and Herre (1924) recognized *A. testudineus* only. The validity of *A. oligolepis* has not been seriously examined and it was believed that only one species *A. testudineus* (= *scandens*) occurs in India. Seshagiri Rao (1968) recorded and described both *A. testudineus* and *A. oligolepis* from Bhimavaram, Andhra Pradesh and distinguished the former by its less deep body, longer pectorals and shorter snout. Ramaseshaiah (1978) carried out detailed investigations on the two species, *testudineus* and *oligolepis* and found differences in body depth, labyrinthine organ; number of chromosomes; dorsal fin rays, gillrakers on the outer edge of the first gill arch, number of scales below lateral line, lateral line scales; content of ninhydrin-positive compounds in the body surface mucus, content of aspartic acid in the eye lens; proteins of eye lens, skeletal muscle and heart muscle; the esterase patterns of serum, liver, kidney, skeletal muscle, heart muscle and eggs and mobility of LDH fraction of eye lens. He has also found the fecundity of *A. oligolepis* to be higher than that of *testudineus*. Jayaram (1981) listed both *testudineus* and *oligolepis*. Dutt and Ramaseshaiah (1980, 1983) and Ramaseshaiah and Dutt (1984) have given an account of differences between the two species in chromosome number, biometrics and electrophoretic studies respectively. Thakur and Das (1986) have compiled a useful synopsis of biological data on *A. testudineus* but, some of the data may be attributable to *A. oligolepis*. The two species of *Anabas* Curvier, 1816, can be distinguished using the following key.

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1. body depth 3.1-3.5 in standard length ... *A. testudineus* (Bloch)
2. body depth 2.5-2.9 in standard length ... *A. oligolepis* (Bleeker)

Distribution: Available data suggests that the distribution of *A. oligolepis* is more widespread than expected. A total of 29 specimens of *Anabas* species present in the collections of the Zoological Survey of India, Calcutta, have been examined (all of them labelled as *testudineus* or *scandens*). Among them only nine specimens are *A. testudineus* and the remaining twenty are *A. oligolepis*. There are three specimens collected by Francis Day. One of them, the original figured specimen (pl.78, Fig.3.,f/1646, collected from Calcutta) is *testudineus*. The other two specimens from Guwahati and Ganjam are *oligolepis*. Thus Day was meticulous in selecting the specimen for the drawing. *A. oligolepis* is recorded from the following places:

Ganjam and Sur Lake (Orissa); Hooghly river at Baneswarpur and Calcutta (West Bengal); Ranchi (Bihar); Loktak Lake (Manipur); Guwahati(Assam); Jessor Bheels (Bangladesh); Pegu (Burma) -- based on Z.S.I. material; Bhimavaram, Akiveedu and Kalkalur (Kolleru Lake), Machilipatnam, Kankinada(Andhra Pradesh) and Red Hills Lake (Madras) — based on author's collection; Bandjermasin (Borneo) — based on Bleeker (1855); Sri Lanka — based on Dera-niyagala (1929).

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Plate 1

Anabas testudineus (Bloch, 1792) 113.0 mm S. L. (above) and *A. oligolepis* (Bleeker, 1855), 113.0 mm S.L. (below), Bhimavaram, Andhra Pradesh.

