

ANOTHER IMPORTANT ICHTHYOLOGICAL FIND IN THE KRUGER NATIONAL PARK (*PROTOPTERUS ANNECTENS BRIENI*)

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In a previous publication Pienaar (1978 *The freshwater fishes of the Kruger National Park*, Publ. National Parks Board) provides a systematic account and check-list of the freshwater fishes of the Kruger National Park (KNP), Republic of South Africa. Altogether 48 species are listed, including several representatives of the tropical, Mozambique fish fauna such as *Barbus toppini*, *Platygobius aeneofuscus*, *Aplocheilichthys johnstonii*, *Nothobranchius orthonotus*, *N. rachovii* and the marine species *Acanthopagrus berda* and *Carcharinus leucas*. The check-list is the result of a 25 year survey period. It was mentioned that the non-recording in Park waters of certain tropical species with wide and proximate ranges of distribution such as the black tilapia *Sarotherodon placidus*, the snake catfish *Clarias theodorae* and the lungfish *Protopterus annectens brienii* was difficult to explain.

The lungfish is an inhabitant, amongst other waters in southern Africa, of the swampy areas of the middle and lower Zambezi, Pungwe, Buzi and Sabi Rivers in Zimbabwe and Mozambique (Jubb 1967 *Freshwater fishes of southern Africa*, Cape Town: Balkema). Further north, *P. annectens brienii* is found in swampy areas adjoining the Luapula River in Zaire, and other subspecies occur as far afield as West Africa. More recently, these rare air-breathing fishes were also recorded from veld pans in the Gona-re-Zhou National Park in Zimbabwe and flood pans along the Limpopo River, less than 50 km east of Pafuri in the north-eastern corner of the Kruger National Park (Gaigher 1969 *Aspekte m.b.t. die ekologie, geografie en taksonomie van varswatervisse in die Limpopo- en Incomatiriviersisteme*, Ph.D. dissertation, Randse Afrikaanse Universiteit). Gaigher regards the Chualo Lake area along the lower Incomati as the southernmost limit of the distribution range of the southern subspecies of *Protopterus annectens*. No records of lungfish within the borders of the Republic of South Africa have been documented to date.

On 1981.04.21, a group of research workers from the University of the North at Pietersburg, i.e. Prof. J. E. Saayman and Mr. L. Polling, in the company of Mr. D. L. Theron and Regional Ranger D. C. Swart of Phalaborwa, visited the Pumbe sandveld area just north of the 24°15' latitude on the border with Mozambique. (Fig. 1). The purpose of their visit was to collect killifish *Nothobranchius orthonotus* and *N. rachovii* in the pans near the old picket for a malarial research project.

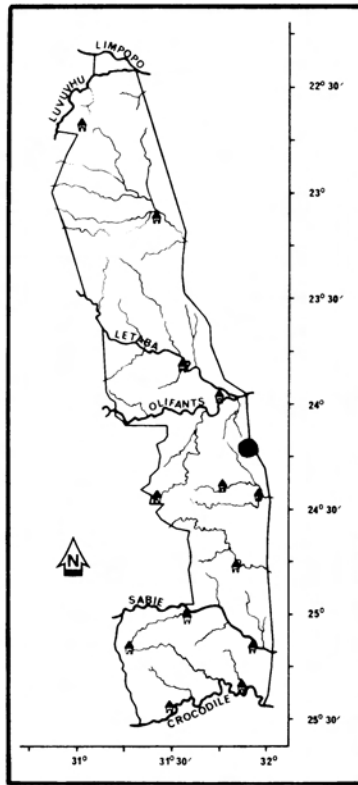


Fig. 1. Locality ● where specimens of lungfish were collected.

Ironically, the first fish specimen netted was not a *Nothobranchius* but a young lungfish some 8 cm long still exhibiting the external gills of the larval stage (Fig. 2). Subsequently three additional young lungfish were collected. Indications of the presence of adult fish were also seen and it became evident that lungfish breed in these pans. During a subsequent visit to the Pumbe habitat (1981.05.15) a further 42 young lungfish from 7-12 cm in length were collected by the author as well as three adult fish. It was also established that the lungfish is well-known to local inhabitants in the adjoining area in Mozambique, and that there is an abundance of these fishes in other larger pans close to the Park's eastern boundary. The habitat in the KNP of these remarkable and primitive fishes is a small pan of about 20 meters diameter with a bottom of deep black peaty mud. The water surface is partly covered by water lilies and there is also an abundance of other aquatic plants, sedges and grasses, affording ample cover for a diverse variety of aquatic life forms.

Zoogeographically and otherwise, the Pumbe sandveld is a most important biotic zone in the Kruger National Park. It is located on the Lebombo Mountains, forming the border between the KNP and Mozambique at an altitude of some 340 meters, and is contiguous with the vast sandveld plateau in Mozambique between the Olifants- and Sabie Rivers. This isolated area of deep white aeolian sands support

elements of the tropical fauna and flora of the Mozambique littoral plains which do not occur elsewhere in the KNP, or which are only found in another similar (but larger) sandveld zone on the Mozambique border south of Pafuri (the so-called Nyandu sandveld). In this respect, the following species are of particular interest or significance: the killifish species, *Nothobranchius orthonotus* and *N. rachovii*; the knocking sand frog, *Tomopterna krugerensis*; the lizards, *Mabuya homalocephala depressa* and *Zygaspis violacea*; the snakes *Lycophidion variegatum* and *Xenocalamus bicolor lineatus*; the crustacean *Apus numidicus*; and the following tree, shrub and grass species: *Pseudolachnostylis maprouneaefolia*, *Salacia kraussii*, *Diospyros usambarensis*, *Eugenia zeyheri*, *Alloteropsis cimicima*, *Urochloa stolonifera*, *Digitaria smutsii* and *D. didactyla*.

To this list can now be added the African lungfish, *Protopterus annectens brienii* Poll, 1961 as a first record for the Kruger National Park as well as for the Republic of South Africa.

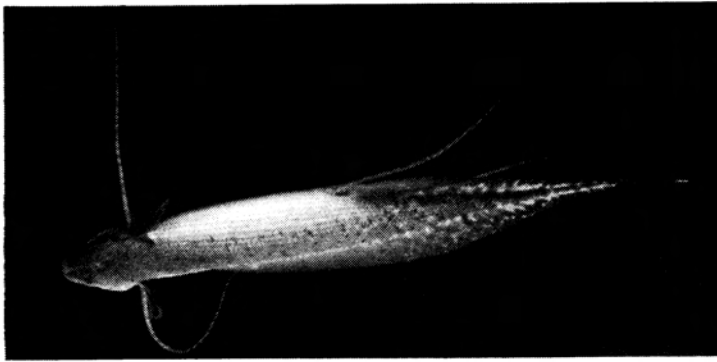


Fig. 2. Young lungfish, *Protopterus annectens* showing persistent external gills of larval stage.