Environmental Biology of Fishes **58:** 214, 2000.

Threatened fishes of the world: *Ophisternon candidum* (Mees, 1962) (Synbranchidae)

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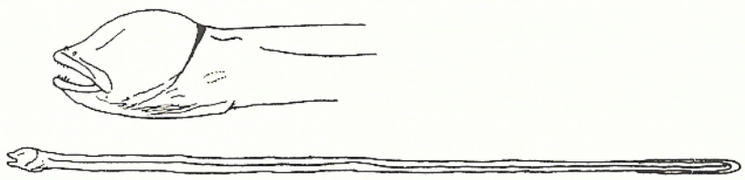

Common name: The blind cave eel (E). **Conservation status:** Threatened (Western Australian Wildlife Conservation Act); Data Deficient (World Conservation Monitoring Centre). **Indentification:** This is the only species of troglobitic (obligatory cave, blind, depigmented) synbranchid of Australia and one of the only two species of troglobitic vertebrates for that continent. It is on average 343 mm SL, and ranges between 316 and 370 mm. Body extremely elongated, eel-like, and roundish. Head comparatively short, its height about half of its length. Head deeper than any other part of the body. Mouth comparatively large. Lips thick, especially interiorly. Teeth fairly strong, in several rows. Tongue well developed. One pair of very small nostrils at the tip of the snout in the upper lip. A second much larger pair of nostrils on upper surface of snout just before elevation of forehead. Nostrils rounded each covered by dermal flap. The specimen we examined (WAM 4918-001, paratype) has 150 vertebrae, but variation can be expected. No fins except a thin rayless finfold near and around the tip of the tail where four or five hypurals are present. No externally visible eyes. The lateral-line system is distinct and continuous to near the tip of the tail. Several pairs of mucuous pores are present on the head, difficult to see. Throat with some longitudinal dermal folds. Four pairs of well developed gills. Gill openings rather wide, transverse, the covering skin lunate in shape. Anus in anterior half of the body. Whitish coloration in the skin. **Distribution:** Western and northeastern coastal plain of the Cape Range peninsula and Barrow Island, Western Australia. **Abundance:** Found in 11 locations (2 now destroyed) in numbers ranging from 1 to 3. No population size estimate or population structure analysis have been performed. There are no data available on population dynamics or sex ratios. **Habitat and ecology:** In wells, sinkholes, and caves, and possibly in ground water. Water supply: groundwater on seawater wedge. Inundation: permanent, tidal in places. Water depth: in wells 0–0.5 m, in caves to 3 m and showing tidal movements. Thin layer of freshwater in places overlaying brackish water. Water pH: 6.8–7.3; salinity: 1–8‰. This species feeds on invertebrates and forms part of an unusually diverse troglobitic community. **Threats:** Current major threats are nutrient enrichment, lowering of the water table, and urban and tourism development. Potential threats include limestone quarrying, as well as quicklime manufacture, petrochemical, heavy metal, nutrient pollution, and road construction and vegetation clearance. One site is also used for grazing by sheep and feral goats. There is a naval communications station, military and civil airfields, and an aerial bombing range in the general area. There are no data on survival and mortality rates. Ecological interactions with another cave fish species, *Milyeringa veritas*, unknown. **Conservation action:** Part of the distribution area is within the Cape Range National Park. The north part of the site has been proposed to be added to the National Park. **Conservation recommendations:** Limit human access to caves. There should be a control on the grazing practices in recharge area. Collecting for scientific/educational purposes should be highly restricted and aimed mostly to recovery and conservation programs. Collecting for other purposes should be totally banned until more information on population sizes is available. Additionally, there should be an aggressive research program that includes, but sould not be limited to, research on the biology and distribution of the species as well as on the Cape Range karst wetlands ecosystem, local and regional hydrological patterns, field surveys of caves in the Cape Range karst wetlands, and continuous monitoring of data on water quality. **Remarks:** Originally described as *Anommatophasma candidum* in 1962. Only a few specimens have been collected. This is one of three different species of Synbranchidae that have colonized underground environments, showing similar conversions in morphological features. The ancestor of *O. candidum* was probably a synbranchid that lived in the Tethys sea.

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