

RECOMMENDATION

Branchinella buchananensis – (BUCHANANS FAIRY SHRIMP)

The Fisheries Scientific Committee, established under Part 7A of the *Fisheries Management Act 1994* (the Act), has made a recommendation to list *Branchinella buchananensis*, Buchanans fairy shrimp, as a VULNERABLE SPECIES in Schedule 5 of the Act.

Listing of Vulnerable Species is provided for by Part 7A, Division 2 of the Act.

The Fisheries Scientific Committee has found that:

1. *Branchinella buchananensis* Geddes, 1981 is a valid species. The type locality for *B. buchananensis* is Lake Buchanan (an intermittently inundated salt lake) in southwest Queensland. Specimens from New South Wales and Lake Buchanan are indistinguishable.
2. *Branchinella buchananensis* is a small crustacean of 2 to 3 cm in length that is related to brine shrimp. It swims in the water column of temporary saline lakes (salinities between freshwater and seawater, 3 – 35‰).
3. The eggs of *Branchinella buchananensis* are able to remain viable in completely desiccated lake beds for years or decades, and hatch as soon as conditions are suitable. This species appears soon after the lake fills and feeds on planktonic algae. As the lake dries and the water becomes more saline, this species lays resting eggs, which fall to the sediment. The eggs require desiccation before they will hatch. The primary habitat for this aquatic species is dry for most of the year.
4. *Branchinella buchananensis* is not currently included as a threatened species on any State or Commonwealth list.
5. In New South Wales, *Branchinella buchananensis* is known only from Gidgee Lake (29° 32' S and 144° 50' E) and Burkanoko Lake (29° 46' S and 144° 48' E), approximately 130 km NW of Bourke in the northwest of the state. These sites are not in any designated conservation reserves.
6. Any number of development activities, for example mineral extraction, could cause significant disturbance to the beds and hydrology of these lakes and lead to the extinction of this species.

7. In light of 5 and 6 above, the Fisheries Scientific Committee is of the opinion that *Branchinella buchananensis* is likely to become endangered unless the circumstances and factors threatening its survival or evolutionary development cease to operate. Therefore, the species qualifies for inclusion in Schedule 5 of the *Fisheries Management Act 1994* as a VULNERABLE SPECIES.

Dr Andrew Sanger
Chairperson
Fisheries Scientific Committee