



Southern Bell Frog

Litoria raniformis

Rice farms provide vital habitat for numerous species in areas where many animals have suffered habitat loss or even faced extinction. The Southern Bell Frog is one such case, a little known about frog that has made its home in the rice farms throughout the rice growing region. The Southern Bell Frog relies on the rice industry for its survival.

The Southern Bell Frog (scientific name litoria reniformis) is listed as an endangered species by the NSW National Parks and Wildlife Service.

Habitat:

The Southern Bell frog is commonly located in swampy irrigated areas, reservoirs, farm dams and the periphery of rivers. The frogs also live in rice bays, in artificial wetland surroundings, where they breed over the summer months. It is believed that this habitat has assisted in the total preservation of the species.

About the Species:

Very little is known about the ecology and population biology of the species, but it appears that they are highly vulnerable. There is evidence of a dramatic decline in this species throughout portions of its range in south eastern Australia. In some areas where it was abundant it has since disappeared.

The Southern Bell Frog feeds primarily on insects, but will also eat other small frogs. The biggest threats facing the Southern Bell Frog include birds, cold weather, drought, the quality of water, herbicides and habitat destruction.



Distribution:

Until the 1980s, Southern Bell Frogs were plentiful throughout the wetland habitats of south eastern Australia. Formerly found in South East SA and the Murray Valley, most of Victoria and the ACT, south western NSW and northern and eastern Tasmania, current reports estimate the once abundant Southern Bell Frog in wetland areas, are now becoming scarce. The species has completely disappeared from the ACT and the southern tablelands of NSW and there are reports of serious decline and local extinctions in Victoria and SA. There are however, several large localities in parts of metropolitan Melbourne and in regional Victoria. The reason for their decline since then is not fully understood.

Reasons for Decline:

The reasons for the decline of Southern Bell Frogs in Australia are unknown. However, there appears to be very close links with decline in drought and recovery in wet years. A possible hypothesis is about the decline is their habit of basking, and so may be exposed to high levels of ultra-violet radiation.

It has been suggested that a herbicide containing a dispersant is directly responsible for some declines where it has been used around dams. In Western Australia, the tadpoles of a closely related species, *L. moorei*, have been found to be very sensitive to glyphosate (Bidwell and Gorrie 1995)



Research on the Southern Bell Frog:

Research about the Southern Bell Frog is currently being undertaken with the aim to:

- > learn more about the Southern Bell Frog
- > establish the extent of the decline of the Southern Bell Frog
- > identify strategies and management for the maintenance and conservation of the frog.

The preservation of the species is very important for the biodiversity of the environment in the rice growing region.

The Ricegrowers' Association of Australia has developed a plan to ensure that the biodiversity of the environment remains in the rice growing areas as much as possible. This plan is part of the Rice Environmental Policy which specifically focuses on rice production. The policy provides strategies and actions for the rice industry, including rice farmers, to identify and meet environmental challenges and implement appropriate change.