

THE PRECARIOUS STATUS OF *RANA DALMATINA* ON JERSEY

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The Agile Frog (*Rana dalmatina*) has a wide range throughout much of central and southern Europe, including the Channel Islands of Jersey and Guernsey (Frazer, 1989). Literature suggests that since the 1940s this species has been recorded at relatively few sites on Jersey, with the species' stronghold being at Quaisné, on the south-west of the island (Tonge, 1986). In addition, populations of Agile Frogs on the island have been declining since the mid-1940s and numbers have continued to decrease dramatically during the 1980s. In 1986 the Jersey Wildlife Preservation Trust was invited to co-operate with a local captive rearing and release initiative. Froglets were reared in captivity and released at Ouaisné. However, the released animals did not survive at the site and the decline of frogs in the wild continued. Searches for Agile Frogs, carried out in successive years between February and April, have revealed that the population has declined almost to extinction. In 1993, only two spawn clumps were found (Jones and Freeman, 1993). No breeding adults have been found over the last two years, although this year (1995) about thirty juveniles were discovered.

Tonge (1986) speculated that the decline in Agile Frogs at the key site at Ouaisné was due to the vegetational succession of ponds and possibly a lowering of the water table. However, loss of breeding sites does not appear to be the sole cause of the decline. Introduced predators, such as fish, domestic cats, some of which may now be feral, and ferrets must have taken a toll of the frogs. Furthermore, the key to the disappearance of the Agile Frog may lie in the quality of the water on the island. Intensive agriculture and sporadic sewerage leakages into water courses may be affecting water quality to the detriment of the frogs.

Two other amphibians are found on Jersey, Palmate Newts (*Triturus helveticus*) and Common Toads (*Bufo bufo*). Palmate Newts are still widespread and common. However, Common Toads, although they are breeding in garden ponds, seem to be experiencing adverse conditions beyond the garden habitat, where large-scale spawn mortality has been observed. A survey of water bodies, other than garden ponds, was carried out by Kevin Buley on behalf of Jersey's Environment and Countryside Services. Of 352 water bodies, toad spawn was found in only seven of them, and of these only four sites were recorded, where tadpoles survived in numbers sufficient to ensure significant recruitment. In addition to the ponds surveyed by Buley, one more successful toad breeding site has been recorded, giving a total of only five known, productive toad breeding sites on Jersey, besides garden ponds.

Initiatives progressing under direction of Jersey's Environment & Countryside Services include investigations of water quality, paying particular attention to the high nitrate levels that have already been recorded. In addition, the rearing and release programme is being continued, in collaboration with the Jersey Wildlife Preservation Trust and several private

individuals on the island. Enclosures in private gardens and at the Jersey Wildlife Preservation Trust are being used to maintain breeding populations of Agile Frogs and also to rear juveniles. Some seventy adult frogs form the captive breeding population, and this year approximately 300 newly metamorphosed froglets are being reared. A major factor contributing to the success of the rearing enclosures, compared with the fate of the frogs in the wider countryside, seems to be water quality. The breeding enclosures incorporate ponds that are constructed with impermeable liners or moulds, and are filled by rainwater rather than being exposed to inputs from watercourses.



Plate 1. *Rana dalmatina*, adult

Last year (1994), tadpoles were released into a natural pond, located to the north of the island. This location, where there are three ponds in close proximity, is a particularly important amphibian site on Jersey. It is probably the only natural site left with the potential to act as a successful recipient for released frogs, and it is also the breeding stronghold of the Common Toads. Fortunately, the tadpoles of the two species do not appear to compete directly, occupying different habitats within the pond. The released Agile Frog tadpoles have survived to metamorphosis at this location and small, but rapidly growing frogs were observed in the area during the later part of the summer. Further releases of tadpoles are planned for 1996 and it is hoped that Agile Frogs will become established at this site. Future plans to construct artificial breeding ponds in suitable habitats are being discussed and an investigation into the genetic differences between the Jersey and mainland Europe populations of Agile Frogs is also planned.

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ERRATUM: In: "Baker, J and Gibson, R. (1995). The precarious status of *Rana dalmatina* on Jersey. *British Herpetological Society Bulletin* 54, 34-36", the photograph of *Rana dalmatina* should have been credited to Robert Guyétant.