



TO CATCH A DRAGON

STORY AND PHOTOGRAPHY BY MICHAEL SNEDIC

Catching dragons is hard work, but it is leading to some intriguing discoveries.

The name 'dragon' evokes images of magnificent mythological reptiles in secret caverns guarding treasures of inestimable value. Some of these legends breathe fire, some change shape, some are wise or rapacious, but nearly all are difficult to find and almost impossible to capture.

At 55mm plus tail, the grassland earless dragon (*Tympanocryptis lineata pinguicollis*) is on the small side compared to the great beasts of mythology, but it does share in the guardianship of Australia's reptile biodiversity – a priceless treasure – and finding and catching one of these creatures requires heroic effort. Just ask Carly Starr.

Rediscovering an endangered species

An honours student in wildlife biology at the University of Queensland (UQ), Starr has been focusing a 12-month research project on the little dragon. Often in searing and unrelenting summer heat, covered in dust and ending each day physically exhausted, she has set hundreds of traps, then painstakingly checked and recorded any dragons caught.

As recently reported by Rob Hobson in *Wildlife Australia* (V40-4), students at UQ's Gatton campus discovered grassland earless dragons on the Darling Downs in southeast Queensland. The January 2001 find significantly extended the range of a

Endangered in the ACT and NSW, critically endangered in Victoria and only recently discovered in Queensland, the grassland earless dragon is attracting research interest. Can it survive in agricultural areas as well as its native grassland habitat?

species now endangered in the ACT and NSW and critically endangered in Victoria. Starr's project, the first of its kind in the Darling Downs, continues the university's link with the dragon, with support from the Environmental Protection Authority and World Wildlife Fund.

Dragon strips

One common theory for the grassland earless dragon decline is that only 1 percent of its original native grassland remains in the Darling Downs. Very few individuals have been caught in native grassland traps. This could be due to the trap-shy nature of the dragons. However, most successful trappings have been amongst crops such as sorghum and, over the last few years, sightings have increased considerably. At the same time, old monocropping procedures, which led to soil degradation and erosion, are being replaced by stripcropping, which involves 'resting' strips of land and allowing the previous year's stubble to remain. Starr theorises that the practice benefits the dragons, as they are able to move to neighbouring strips during cultivation and ploughing.

One species or three

With so little known about the dragons in this highly volatile habitat, current research is aimed at acquiring baseline data. This includes comparing morphological differences between Darling Downs dragons and the remaining southern populations. So many substantial differences have been found between the ACT and Cooma populations that researchers suggest they should be considered separate taxonomic units. Starr is confident that current genetic work will reveal species level differences between the Queensland and southern populations as well.

Seasons and cycles

One reason for Starr's hot-weather pursuit of dragon specimens is that research on southern grassland earless dragon populations reported the animals were in torpor in winter. However individuals have been observed above ground in mid June. Females lay clutches of three to six eggs and gravid females have been found in both spring and early summer but, again, very little is yet known about their breeding behaviour and reproductive cycles.

Wherever there's food

Research on Cooma and ACT dragons suggested that the animals are grassland specialists. However, in a rather surprising result, a study indicates that the Darling Downs dragons may not be.

Ants are the main food for grassland earless dragons, although they prey on both adult and larval forms of other invertebrates. During Starr's survey, dragons were substantially more abundant in grain sorghum than in other highly abundant habitat types available in the Darling Downs. Researchers analysed the body condition of individual dragons and also noted the invertebrates in the area. They found that the dragons' diet varied seasonally and that, basically, they ate whatever invertebrates they could capture. It appeared that the availability of prey and the ease with which it could be caught determined the dragons' diet. Therefore the researchers surmised that the availability of prey was an important factor in the dragons' abundance in sorghum stubble fields. However, more detailed information on the dragons' diet would be essential if a captive breeding program were to be developed.

Is this preference for agricultural settings similar throughout the seasons? What effects do rodenticides and pesticides, commonly used on agricultural crops, have on the dragons? Starr's research under harsh and demanding conditions is building the database, but more heroic dragon captures will be required to continue this important research.

MICHAEL SNEDIC has just completed his environmental studies at the University of Queensland, Gatton campus, and is now working as a Quarantine Officer based at Brisbane Airport. His love of nature photography grows daily!