SPERM STORAGE IN AN EASTERN BLUE-TONGUED SKINK TILIQUA SCINCOIDES (HUNTER, 1790).

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Reproduction in Australian snakes and lizards has been relatively little studied. Sperm storage is known and has been previously documented in some Australian species. Examples of incidents possibly indicative of sperm storage in snakes are documented by Magnusson (1979) for an Arafura File Snake Achrochordus arafurae and Hoser (1995) for Death Adders Acanthophis antarcticus.

For the A. arafurae the sperm storage or fertilised egg retention was for 7 years. Furthermore a case at Brookfield Zoo, Chicago, in the United States indicated a possibility of parthenogenesis in specimens of this species (Anonymous, 1989). (Shine et. al. 1995, suggest the above results may be from long term 'mummification' of embryos rather than sperm storage or parthenogenesis).

For the A. antarcticus the sperm storage indicated appeared to be over winter only. Withers and O'Shea (1993) are of the view that sperm storage of two to three months is common in snakes. This view has been corroborated by Shine's studies on many species, which are largely summarised in his book (Shine, 1991).

Ehmann (1992) indicates over winter sperm storage for a number of smaller skinks, including Leiolopisma rawlinsoni for which he specifically states that sperm storage occurs over winter. Sperm storage over winter in a population of Hemiergis peronii was documented by Smyth and Smith (1968), although Hutchinson (1993) notes a degree of variability between different species within this genus, indicating that not all females routinely store sperm over winter. Most Australian lizards (or snakes) have not been properly studied to indicate their ability to maintain viable sperm over long periods of time.

At about Christmas 1985-6, Neil Simpson caught a gravid female T. scincoides at Milperra, NSW (33? 57'S, 150? 58'E). He housed the lizard in the nearby suburb of Bankstown where 23 live young were produced. The adult was retained in a cage by itself and produced a second litter of 12 young the following summer. At no stage did the adult lizard have

contact with others of it's own species except for the young produced in 1986 (immediately after birth only). Thus there was no possibility of the female mating with young as in the case documented by Riches (1988). Simpson was unable to recall if unfertilised ova or similar material was passed by the female, although he noted that on both occasions there were no stillborn young (or none observed).

To the best of our knowledge there have been no other evidence for sperm storage documented in T. scincoides. The case documented above may not represent typical behaviour for this species. However assuming this phenomena has gone unreported in this relatively large and common species over the last two hundred odd years, then it may be a similar story for other common Australian reptiles. It is critically important for those who maintain reptiles in captivity to keep accurate contact and reproduction records so that cases of possible sperm storage are more readily diagnosed and hopefully reported. This note has been published in the USA first as there appears to be more breeding of Bluetongues (Tiliqua) in that country than in Australia, so further observations involving potential sperm storage are more likely to be observed in the USA.

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