

PHYSIGNATHUS LESUEURII (Australian Water Dragon): PREDATION ON A SKINK (LAMPROPHOLIS DELICATA). The Water Dragon *Physignathus lesueurii* is a common agamid lizard of the eastern seaboard and adjacent regions of Australia (Cogger, 2000). It is a large species which may reach a head-body length of 25 cm (Ehmann, 1992) and in common with many other Australian dragons is essentially a sit-and-wait predator. It is known to feed on insects, small vertebrates, fruits and berries (Wilson & Knowles, 1992; Cogger, 2000) and apparently under certain conditions, hatchlings of its own species (Ehmann, 1992). Few detailed observations of predatory behaviour of *P. lesueurii* have been made, however, particularly on reptilian prey. We report here on repeated predation by *P. lesueurii* on a skink *Lampropholis delicata* at the Australian Botanical Gardens, Canberra, ACT. The Grass Skink *L. delicata* reaches a head-body length of up to 3.7 cm and is known to forage in low vegetation, grass or leaf litter where it feeds on small invertebrates (Lunney et al., 1989; Ehmann, 1992). It is a common species in a whole series of habitats in the ACT including suburban gardens (Bennett, 1997).

The observations were made during a field study on the behaviour of *P. lesueurii* at the

Australian Botanical Gardens during November and December 2000. There were eight observations of predation, all on adult skinks, the details of which are given in Table I. Events 1 through to 6 occurred when individual *L. delicata* were moving across open clearings during overcast weather and 7 and 8 when the skinks were moving along the base of rocky outcrops. The skinks were moving in shaded areas and the dragons were perched on rocks at the time of the incidents. All the dragons involved were adult lizards (but not the largest males) with body masses probably approaching 0.5 kg and, as can be seen from Table I, were apparently able to locate the skinks at distances up to 7 m. We additionally observed two unsuccessful attempts at predation on *L. delicata* by adult and sub adult dragons on 16 December and 11 December respectively. In both cases the skinks were moving in vegetation in shaded areas (shaded air temperatures = 31°C). The dragons travelled about 1.5 and 0.5 m before abandoning the chase when the skinks disappeared into vegetation.

The observations of successful predation reported here were confined to only three days of the field study. Other instances of predation were recorded daily throughout the study period but were confined to invertebrate prey - mainly flies ants and earthworms These were preyed on by *P*

N	Date	Time (hrs)	Weather	Shade temp.	Open area temp.	D.T.
1	29/11/00	12:55	overcast	22	29	2.0
2*	29/11/00	14:07	overcast	24	30	3.5
3*	29/11/00	14:14	hazy sunshine	24	30	2.5
4*	29/11/00	14:53	hazy sunshine	26	35	3.0
5	29/11/00	15:52	sunny	25	36	7.0
6	30/11/00	09:50	sunny	24	35	3.0
7	30/11/00	11:40	overcast	24	38	2.0
8	01/12/00	13:40	overcast	20	43	1.8

Table 1. Details of *P. lesueurii* predation on *L. delicata*. The approximate distances travelled in metres by the water dragons (D.T.) to capture the skinks are shown, together with local times. Shaded and open area (high) temperatures in °C are based on the temperatures of water-filled black painted copper cylinders employed during the study to measure environmental temperatures. The * denotes the same individual *P. lesueurii*.

lesueurii of all size classes (alpha males, adults, sub adults and juveniles). It may be of further interest that despite the high population densities of *P. lesueurii* on the study site, we saw no instances of predation by large dragons on juvenile or sub adult individuals, perhaps a surprising finding given the frequent close proximity of all size classes in this environment.

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