## DRAGONFLIES AT FOUR VERY DIFFERENT SOUTH AFRICAN SITES (ANISOPTERA)

During a holiday in South Africa in December 1988 and January 1989 a number of localities in the Transvaal and Natal were visited. This note describes four specific sites where Odonata were observed over periods of several days and then lists the anisopteran species identified together with an indication of numbers seen and a few behavioural notes.

(A) Umhlanga Rocks Settling Ponds, Natal; 26 Dec. 1988-5 Jan. 1989 — Umhlanga is a coastal town 20 km N of Durban and its sewage installation, consisting of four ponds, is situated in a river valley some 4 km to the NW. The ponds discharge into the river which, in turn, runs into the Umhlanga Lagoon. There are extensive cane fields on three sides and an area of forest to the East. — The largest of the ponds receives the sewage works discharge and is mostly devoid of either marginal or floating vegetation; very few Odonata were seen on this. Two of the smaller ponds are well endowed with water-lilies and they and the fourth pond have good marginal vegetation. The ponds are surrounded by grass which is regularly mown.

(B) Casa do Sol Hotel, Hazyview, eastern Transvaal; 11-15 Jan. 1989 — The Hotel is situated on the southern slopes of the Sabie River valley, some 4 km W of Hazyview. The grounds are extensive, occupying a wide basin running up to the top of the crest and consisting mainly

of bushveld, with a few more thickly wooded areas following the valleys. A sizeable dam has been built in the lower part of the basin which is fed by two streams; the overflow runs down a small gorge to a second, smaller dam. Paths have been opened up for walking and riding; these are kept mown and provide good hawking and resting areas for Odonata. The main dam is largely surrounded by reed beds and partially covered with water-lilies.

(C) Dis-used road near Duiwelskloof, NE Transvaal; 16-22 Jan. 1989 — The site is E of the R36 between Tzaneen and Duiwelskloof, about 4 km S of the latter and just S of the turn off to Politsi on the other side. It comprises a stretch of dis-used and partially overgrown road, running close to and then crossing the Ramadiepa River. The river runs over the small Hans Merensky falls before passing under the R36 and then flowing through a broad belt of mature riverine forest, penetrated only by dappled sunlight. The dis-used road, in contrast, is in full sun for most of the day and, in places, has broad verges of long grass.

(D) Vacant plot, Atlasville, Johannesburg; 6-10 & 23-28 Jan. 1989 — A small (quarter hectare) vacant plot in the suburb of Atlasville, between Benoni and Boksburg in East Rand. The plot is about 200 m from a stream, the banks of which have been developed as a small park. Within less than I km, the stream joins a large dam which is much used for boating and swimming. The plot has one or two rock outcrops which provide good basking sites and is otherwise covered with long uncut grass. There are many such plots in the area but, for some reason, only this one (in Melkweg Street), is chosen regularly as a night refuge for appreciable numbers of dragonflies. They begin to arrive at 4 pm and remain until 10 or 11 am the following morning.

Table I — Species and field observations

Species	No. of individuals at localities				Behavioural not
	Α	В	C	D	
Gomphidae					
Ictinogomphus ferox	1	ı	2-5	-	
Ceratogomphus pictus	-		-	6-10	Early morning & evenings
Aeshnidae					
Aeshna minuscula	t	-		2-5	

Table I — Continued.

	N		dividual	at		
Species	localities			_	Behavioural notes	
	A	В	С	D		
Anax imperator	2-5	2-5	2-5	2-5		
Anax speratus	-	1	2-5	-	Oviposited at C under bank of fast stream	
Anax tristis	-	2-5	-	-	-	
Hemianax ephippiger	20+	-	-	2-5	Oviposited in tandem at A into floating vegetation. Over water until noon	
Corduliidae						
Macromia nyanzana	-	2-5	2-5	-	Solitary. Flew fast 2-4 ft above ground	
Libellulidae					_	
Orthetrum caffrum	-	2-5	2-5	-		
O. chrysostigma	2-5	2-5	-	6-10		
O. julia	6-10	2-5	6-10	-		
O. trinacria	11-20	11-20	-	-		
Nesciothemis farinosa	2-5	6-10	2-5	-	None over water	
Crocothemis erythraea	2-5	2-5	6-10	2-5		
C. sanguinolenta		-	11-20	-	Settled on metalled road surface	
Sympetrum fonscolombei	-	-	-	2-5		
Philonomon luminans	-	-	-	2-5		
Trithemis kirbyi	2-5	2-5	-	-		
T. annulata	2-5	-	-	1		
T. arteriosa	-	6-10	6-10	-		
T. pluvialis	-	-	1	-		
T. stictica	-	-	11-20	-	Only beside the river; none on roadside	
T. dorsalis	-	6-10	6-10	11-20	·	
T. hecate	-	-	-	2-5		
T. furva	6-10	-	-	6-10		
Diplacodes lefebvrei	20+	20+	-	-		
Acisoma panorpoides	-	20+	-	-	Forest paths at distance from water	
Brachythemis leucostica	20+	20+	6-10	-	3-4 & mobbed each ovipositing. Tholymis	
Palpopleura lucia	2-5	2-5	-	2-5	1 3 4 4 4	
P. jucunda	-	-	-	2-5		
Urothemis assignata	2-5	11-20	-	-	Only & seen	
U. edwardsi	2-5	6-10	1	2-5	,0	
Zygonyx natalensis	•	•	20+	•	10-12 am. Jerky flight; high over road. Aerial mating. Settled in tree-tops.	
Tholymis tillarga	11-20	•	•	•	First appearance ca 4 pm. Mating & ovip. close to bank. Mobbed by Brachythemis	
Rhyothemis semihyalina	-	20+	2-5	-	Roosted in tree-tops, dozens often choosing the same tree	
Pantala flavescens	2-5	2-5	20+	20+	•	

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