

## FAUNA

The vegetation on Paratahi was very dry during my visit and covered in bird droppings. White-fronted terns were nesting in reasonable numbers, though most of their young had fledged. I saw none on eggs, a few with chicks and many fledglings. Dead chicks and old eggs were frequent. There were also red-billed gulls nesting (c. 20 adults), a few with eggs or young chicks. No petrel burrows were present as the ground is too rocky. Large native littoral earwigs (*Anisobasis littorea*) were present under the ice plant mats. No lizards were seen. No rats can be present as old bird eggs and dead chicks were untouched.

## COMMENTS

The adjacent mainland cliffs, although looking very suitable, do not appear to support taupata (if present it must be very infrequent). The common presence of taupata on Paratahi supports the theory by Cameron & Taylor (1991) that taupata is possibly rodent browsed. Rats probably eat its bark and fruit. This also illustrates how important these small rodent-free islands/islets are, not only for fauna but also for preserving flora. In the future it might be possible to use Paratahi taupata to restock Auckland's west coast cliffs.

## ACKNOWLEDGEMENT

I thank Shirley Smith for watching me swim to and from the island and being ready to notify the Karekare Surf Club if I got into difficulties.

## REFERENCES

- Cameron, E.K. & Taylor, G.A. 1989. Oaia Island - south Muriwai. Auckland Bot. Soc. Journal 44(1) : 11-12.
- Cameron, E.K. & Taylor, G.A. 1991. Flora and vegetation of Pudding Island - Mahurangi. Auck. Bot. Soc. Journal 46(1) : 20-23.

## FIVE HUNUA WETLANDS

E.K. Cameron

During two days in August 1988 I assisted the Protected Natural Areas Programme (PNA) survey of five wetlands in the Hunua Ecological District. The 96 species encountered at these sites are appended.

### THE FIVE SITES

- A. Harrison's swamp, lower Ness Valley (grid ref. 260 S11 953653, 40m asl). A large, predominantly flax (*Phormium tenax*) swamp dominated by native species. It approaches 100m across by several 100m's long. It is partly fenced and is partly continuous with native bush. There is localised stock damage. Private land.
- B. Moumoukai, Hunua Ranges (grid ref. 260 S12 017540, 140m asl). A predominantly native swamp dominated by *Blechnum minus* and sedges (*Carex* spp.). Locally, grey willow (*Salix cinerea*) up to 5m tall, blackberry (*Rubus fruticosus*) and Japanese honeysuckle (*Lonicera japonica*) are common. It is over 100m long, unbrowsed with a road on 2 sides and open bush on the other two. ARC land.

- C. Moumoukai by ARC workshop (grid ref. 260 S12 017543, 140m asl). A raupo (*Typha orientalis*) dominated swamp with flax, kahikatea (*Dacrycarpus dacrydioides*) and blackberry common. It is some 100m across, unbrowsed with a road on two sides and bush behind. ARC land.
- D. Sharp's swamp, Ness Valley (grid ref. 260 S11 976652, 40m asl). A long very narrow (2-10m) strip along a slow flowing stream in a small valley surrounded by pasture. It is dominated by raupo with grey willow and reed sweet grass (*Glyceria maxima*) locally common to abundant. The margins are heavily stock browsed. Private land.
- E. 4km south of Clevedon (grid ref. 260 S11 920620, 40m asl). A narrow swampy creek some 200m long x 2-10-(20)m wide, surrounded by pasture. It is raupo dominated with 2 stands of grey willow up to 6m tall. The margins are heavily stock browsed. Private land. The few plants of *Astelia grandis* and the presence of *Baumea tereifolia* growing here are interesting records, so far they are unrecorded in the adjacent Hunua Ranges (cf. Gardner & Dakin 1989).

#### OTHER COMMENTS

The 2 records of the introduced bog stitchwort (*Stellaria alsine*) on the margin of slow flowing water are a new northern limit for New Zealand (cf. Webb et al. 1988). The record of the introduced rush, *Juncus fockei* at Moumoukai appears to be new for the Auckland region, though it has been recorded north (near Orewa) and south (near Hamilton) of Auckland by Healy & Edgar (1980). The records of *Carex maorica* and *Juncus sarophorus* are additions to the Hunua Ranges flora of Gardner & Dakin (1989); if Harrison's swamp at the foothills of the Ranges is inside the Gardner & Dakin boundary then *Calystegia sepium*, *Cyperus ustulatus* and *Isachne globosa* are also additions to the Hunua flora. One specimen of koromiko (*Hebe stricta*) about 50cm tall had leaves in whorls of 3's instead of the usual opposite arrangement (AKU 21741). Only 5 native species and 4 introduced species were present in all 5 wetlands (see appendix).

#### ACKNOWLEDGEMENTS

To the 3 PNA workers (K. Denyer, M. Fromont, M. Tyrrell) for inviting me to join their wetland survey; and to R. Ochyra for identifying the aquatic moss (*Leptodictyum riparium*).

#### REFERENCES

- Gardner, R.O. & Dakin, A.J. 1989. Native vascular flora of the Hunua Ranges, Auckland. *Auck. Bot. Soc. Bulletin* 18.
- Healy, A.J. & Edgar, E. 1980. Flora of New Zealand Vol. III. Government Printer, Wellington.
- Webb, C.J., Sykes, W.R. & Garnock-Jones, P.J. 1988. Flora of New Zealand Vol. IV. DSIR, Christchurch.

APPENDIX : Flora of five Hunua wetlands

	A	B	C	D	E
<u>Ferns and fern allies (16)</u>					
<i>Blechnum minus</i>	x	a	o	x	f
<i>Cyathea dealbata</i>	x				x
<i>C. medullaris</i>	x				x
<i>C. smithii</i>				r	
<i>Deparia petersenii</i>	x			o	x
<i>Dicksonia squarrosa</i>	o-f	o		x	x
<i>Histiopteris incisa</i>				o	x
<i>Hypolepis ambigua</i>					l
<i>Lastreopsis glabella</i>				r	
<i>Paesia scaberula</i>	x			o	x
<i>Phymatosorus diversifolius</i>	e	x		o	
<i>Pneumatopteris pennigera</i>	x			o	
<i>Pteridium esculentum</i>		x			l
<i>Pteris tremula</i>	x				x
<i>Pyrrosia eleagnifolia</i>	e		e		
<i>Imstepteris elongata</i>				lc	le
<u>Gymnosperms (3)</u>					
<i>Dacrycarpus dacrydioides</i>	x	o	o		
<i>Dacrydium cupressinum</i>	r				
<i>Phyllocladus trichomanoides</i>	r				
<u>Dicotyledons (43)</u>					
<i>Ageratina adenophora*</i>					x
<i>Apium nodiflorum*</i>					x V
<i>Callitriche stagnalis*</i>				x	x
<i>Calystegia sepium</i>	x				x
<i>Carpodetus serratus</i>	o	o			o
<i>Clematis paniculata</i>	r				
<i>Coprosma robusta</i>	o-f	x	x	o	x
<i>Cortaria arborea</i>			r		
<i>Digitaria purpurea*</i>				o	
<i>Duchesnea indica*</i>					x
<i>Epilobium pallidiflorum</i>		o	o		
<i>Erichites valerianifolia*</i>					x
<i>Galium aparine*</i>				x	
<i>Geniostoma rupestre</i>	o				
<i>Hebe stricta</i>	o V	f	o		
<i>Hedycarya arborea</i>	x				r
<i>Hypericum adrosaemum*</i>		c			
<i>Kunzea ericoides</i>	o				
<i>Leptospermum scoparium</i>	o-f	x		f	r
<i>Leycesteria formosa*</i>	o			r	
<i>Ligustrum sinense*</i>			r		
<i>Lonicera japonica*</i>		c	x		
<i>Lotus pedunculatus*</i>	x	x	f	x	c
<i>Ludwegia palustris*</i>	x			o	c
<i>Melicytus ramiflorus</i>	o				
<i>Myosotis laxa ssp. caespitosa*</i>	x			x	x
<i>Myrsine australis</i>	x				
<i>Nertera depressa</i>				r	
<i>Pittosporum tenuifolium</i>	r	r			
<i>Polygonum salicifolium</i>	x			x	x
<i>Pseudopanax crassifolius</i>	r	r	r		
<i>Ranunculus flammula*</i>	x				x
<i>R. repens*</i>	c	x	f	c	a

<i>R. sardous</i> *				x	x
<i>Rorippa nasturtium-aquaticum</i> *	x			x	x
<i>Rubus fruticosus</i> agg.*	c	c	c	x	f
<i>Rumex ? congl./crisp./obtus.</i> *	x		x	x	x
<i>Salix cinerea</i> *	x	lc	o	lc	lc
<i>Senecio bipinnatisectus</i> *				r	
<i>S. minimus</i>					x
<i>Sonchus oleraceus</i> *					x
<i>Stellaria alsine</i> *	x V			o V	
<i>Ulex europaeus</i> *	x			x	c

### Monocotyledons (33)

<i>Astelia grandis</i>					o V
<i>Baumea rubiginosa</i>	o	x		x	x
<i>B. teretifolia</i>					x
<i>Carex lessontiana</i>	x	f	x	x	a
<i>C. maorica</i>		a		x	
<i>C. secta</i>	a	x		x	a
<i>C. virgata</i>	o	x	f	x	l
<i>Cordyline australis</i>	c	x	o		r
<i>Coraderia fulvida</i>	c				
<i>C. jubata</i> *		o			
<i>Cyperus ustulatus</i>	x				x
<i>Earina mucronata</i>			e		
<i>Eleocharis acuta</i>		x	x	x	
<i>Glyceria declinata</i> *	x			x	c V
<i>G. maxima</i> *				a	
<i>Holcus lanatus</i> *				x	x
<i>Isolepis reticularis</i>	x				
<i>I. sepulcralis</i> *				x	x
<i>Isachne globosa</i>	x				c
<i>Juncus articulatus</i> *	x	x		x	c
<i>J. effusus</i> *	x		x	x	x
<i>J. fockei</i> *		o V			
<i>J. gregiflorus</i>	x			x	
<i>J. planifolius</i>					c
<i>J. prismatocarpus</i>	x			x	c
<i>J. sarophorus</i>		x	f		
<i>Lemna minor</i>	x				
<i>Paspalum distichum</i> *				x	
<i>Phormium tenax</i>	a	o	lc		l
<i>Poa annua</i> *					x
<i>Rhopalostylis sapida</i>	r				
<i>Ripogonum scandens</i>	x				
<i>Typha orientalis</i>	x	o	a	a	a

### Mosses (1)

*Leptodictyum riparium*

lc V

a = abundant  
c = common  
f = frequent  
o = occasional  
l = local  
r = rare (< 5 seen)

\* = adventive species  
x = present but no frequency rating  
e = epiphyte  
V = voucher specimen lodged in AKU herbarium  
A, B, C, D, E = see text