

Hingaia Stream margin at Drury

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On 15 February 1992 I carried out a 1 hour vegetation survey of the lower 1 km of the Hingaia Stream at Drury in the Manukau Ecological District. The survey started by Norrie Street bridge from where we paddled down the stream and finished at the confluence of Hingaia Stream and Slippery Creek (grid reference 260 R12 832545). From this junction the streams flow west, under the southern motorway and into Drury Creek and then into the Manukau Harbour.

The tidal influence is seen on the north side of Slippery Creek at the confluence with Hingaia Stream where there is a small saltmarsh with 5 species not seen on the Hingaia Stream banks: Apium "white denticles", orache (Atriplex prostrata), Isolepis cernua, Triglochin striata and marsh ribbonwood (Plagianthus divaricatus). Selliera radicans and sea rush (Juncus maritimus) are present c. 100 m up the Hingaia Stream indicating saltwater may reach this far occasionally (or at least used to). Because of storm water backing up in the Hingaia Stream, the lower true left bank has been mechanically cut back since this survey.

VEGETATION & FLORA

The stream traverses many backyards of industrial Drury and its banks are dominated by weeds. The stream is only a few metres wide in places and is almost blocked for a short distance by crack willows (Salix fragilis) growing right across it. Other species which locally dominate the vegetation are swamp willow weed (Polygonum salicifolium), Kikuyu grass (Pennisetum clandestinum), wandering Jew (Tradescantia fluminensis) and water celery (Apium nodiflorum). Some of the trees must have been originally planted e.g. most of the poplars (Populus spp.) and willows (Salix spp.). Apart from the herbaceous swamp willow weed and pink bindweed (Calystegia sepium), native species are a minor part of the vegetation.

The flora totals 96 taxa (see appendix for species list) of which one third are native. Most of the native species are represented by few individuals. Three native species present which are regionally uncommon or local are:

- Coprosma propinqua - local, lower open stream margin, up to 6 m tall, AK 207061;
- toetoe (Cortaderia fulvida) - local, over 20 plants on lower east stream bank surrounded by weeds, AK 207056;
- kaikomako (Pennantia corymbosa) - single 6 m tree, on east bank c. 300 m above confluence, growing with mahoe (Melicytus ramiflorus), mapou (Myrsine australis) and Japanese honeysuckle (Lonicera japonica), AK 207062.

DISCUSSION

The remaining native species gives an insight into part of the composition of this streamside vegetation in earlier times. Most of the 31 native taxa present will become extinct on this section of the river as their habitat continues to be swamped by weeds.

APPENDIX Vascular flora, lower 1 km Hingaia Stream margin

a = abundant
 c = common
 o = occasional
 l = local
 r = rare (less than 5 seen)
 * = adventive or in a few cases planted
 (AK) = voucher in Auckland Museum herbarium

Ferns (6)

Blechnum sp. (kiokio) r	Dicksonia squarrosa r
Cyathea dealbata r	Paesia scaberula r
C. medullaris o	Pteridium esculentum o

Gymnosperms (2)

Pinus radiata * o	Podocarpus totara r
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Dicotyledons (59)

Apium nodiflorum a	Plantago australis * o
Aster subulatum * o	P. lanceolata * o
Calystegia sepium a	Polygonum persicaria * r
C. silvatica * l	P. punctatum * c
Casuarina cunninghamiana * r	P. salicifolium a (AK)
Coprosma propinqua l (AK)	Populus alba * l
C. propinqua x C. robusta o	P. deltoides * l
C. robusta l	P. nigra 'Italica' * l
Corynocarpus laevigatus r	Prunus ?persica * r
Cotula coronopifolia lc	Quercus robur * r
Daucus carota * o	Rosa sp. * l
Foeniculum vulgare * lc	Rubus fruticosus agg. * l
Gnaphalium involucreatum r (AK)	Rumex conglomeratus * c
Hebe stricta xl	R. crispus * o
Leucanthemum vulgare * o	Salix x chrysocoma * r
Ligustrum lucidum * l-c	S. cinerea * l
L. sinense * o	S. fragilis * la
Lobelia anceps l	S. matsudana 'Tortuosa' * r
Lonicera japonica * a	Selliera radicans l
Lotus pedunculatus * a	Senecio bipinnatisectus * o
Lythrum hyssopifolia * l	S. mikanioides * o
Meliccytus ramiflorus o	Solanum diflorum * o
Myrsine australis r	S. mauritianum * o
Olearia solandri r	Sophora microphylla r
Paraserianthes lophantha * r	Symphytum sp. * r
Passiflora caerulea * r	Tropaeolum majus * lc
Pennantia corymbosa xl (AK)	Ulex europaeus * o
Phytolacca octandra o	Verbena bonariensis * o
Picris echioides * c	Vitis vinifera * r
Pittosporum crassifolium r	

Monocotyledons (31)

Agrostis capillaris * l	Glyceria maxima * lc
Alisma plantago-aquatica * o (AK)	Juncus articulatus * o
Alocasia brisbanensis * r	J. maritimus r
Baumea juncea l	J. microcephalus * o (AK)
Canna cvs * l	J. usitatus o (AK)
Carex lessoniana r	Leptocarpus similis o
C. virgata r	Paspalum dilatatum * o

Colocasia esculenta * r	P. distichum * o
Cordyline australis r	Pennisetum clandestinum * a
Cortaderia fulvida l (AK)	Phlaris aquatica * o
C. jubata * c	Phyllostachys ?aurea * r
C. selloana * r	Potamogeton crispus * o (AK)
Crocoshia x crosmiiflora * lc	Schoenoplectus validus lc
Cyperus eragrostis * c	Tradescantia fluminensis * lc
Eleocharis acuta lc	Typha orientalis l
Festuca arundinacea * o	

Book Review

New Zealand's Economic Native Plants by R.C. Cooper and R.C. Cambie. Oxford University Press, 1991. \$49.95.

The native flora of New Zealand is to be treasured not only as among the most ancient in the world but also as a valuable resource. The authors of this treatise cover a vast amount of ground in their survey of human impact on, and utilisation of, this resource; the book is richly furnished with interesting tid-bits of information which are frequently backed up by references to further information.

The contents are wide-ranging, from a brief introduction to the New Zealand flora, through the history of its utilisation, to chapters on plant use in gardens (here and overseas), the timber industry, conservation, fibre and paper, grasses, food and beverages, potions and poisons, chemical products and fragrances and flavours. And the often overlooked elements of the plant world - algae, bryophytes, lichens and fungi are not forgotten.

This volume has its roots in Brooker, Cambie and Cooper's Economic Native Plants of New Zealand published by Botany Division of DSIR in 1988. Where that publication was cheaply produced by black and white offset printing and staple-binding, the volume under review has been professionally published by Oxford. Its hard-covered 234 pages are well-illustrated with plant portraits, including 16 colour plates. It is remarkable that a book containing so much - information included - can be produced in the 1990s to retail at under \$50. Highly recommended.

Anthony Wright