Carex virgata
**Cyperus eragrostis*
**Cyperus tenellus* (18/10/2000)
Eleocharis acuta
Gahnia lacera
Gahnia setifolia
Gahnia xanthocarpa
Isolepis prolifera
Lepidosperma australe
Lepidosperma laterale
Morelotia affinis
Schoenoplectus pungens (mouth of Lawsons Creek, Boffa Miskell report, 1999, but not seen)
Schoenus maschalinus
Schoenus tendo
Tetraria capillaris
Uncinia banksii
Uncinia uncinata

Gramineae
**Agrostis capillaris*
**Anthoxanthum odoratum*
**Axonopus fissifolius*
**Briza minor* (18/10/2000)
**Bromus willdenowii* (18/10/2000)
**Cortaderia selloana*
**Cynodon dactylon*
**Dactylis glomerata*
**Ehrharta erecta*
**Eragrostis brownii*
**Glyceria maxima*
**Holcus lanatus* (18/10/2000)
Microlaena avenacea
Microlaena stipoides
Oplismenus hirtellus subsp. *imbecillus*
**Paspalum urvillei*
Poa anceps subsp. *anceps*
**Poa annua*
**Pennisetum clandestinum*
**Schedonorus phoenix*
**Setaria palmifolia*
**Sieglingia decumbens* (18/10/2000)
**Vulpia bromoides* (18/10/2000)

Iridaceae
**Aristea ecklonii*
**Crocosmia x crocosmiiflora*
**Gladiolus undulatus*
**Watsonia meriana* cv. Bulbillifera

Juncaceae
Juncus articulatus
Juncus gregiflorus
Juncus kraussii var. *australiensis*
Juncus planifolius
Juncus tenuis

Lomandraceae
Cordyline australis
Cordyline pumilio

Orchidaceae
Pterostylis graminea
Thelymitra longifolia (19/10/2000)

Pandanaceae
Freycinetia baueriana subsp. *banksii*

Phormiaceae
Dianella nigra
Phormium tenax

Restionaceae
Apodasmia similis

Ripogonaceae
Ripogonum scandens

Typhaceae
Typha orientalis

Zingiberidaceae
**Hedychium gardnerianum*

A Coastal Turf Community at Cannibal Creek

Cameron Kilgour & Bec Stanley

On 18 October 2000 we visited the mouth of the Cannibal Creek in the Waitakere Ranges. Bot Soc last visited Cannibal Creek in 24th May 1994, but whereas that trip led the group up the stream, turning right when the track from Anawhata met the creek, we turned left and followed the stream to the sea. The creek flows through a shrubland of predominantly flax, manuka, gorse and an impressive stand of mairehau (*Phebalium nudum*) where it widens and becomes a series of waterfalls and pools before entering the ocean from a large and impressive platform typical of the west coast.

The surrounding terrain is steep and rocky (See Fig. 1 opposite) and is covered by secondary vegetation composed of stunted scrubland of flax, manuka, tauhinu *Ozothamnus leptophyllus* p.p. and gorse. The turf community is fairly extensive and covers the landward margin of the rock platform, stream and pool margins and surrounding rocky coast. We have listed the plant species at the turf and in the surrounding shrubland community is also described. No threatened taxa were recorded.

Coastal turfs are communities of salt tolerant low growing herbs, sedges and grasses which grow on the coast in the influence of salt water and high exposure. Turfs occur only on a small fraction of the total coastline in NZ (Rogers 1999) but there are a few other turf communities in Auckland. A narrow coastal turf consisting mainly of *Sellieria radicans* can be seen growing at the ecotone between mangrove and grass along the side of the northern motorway south of the eastern part of Smith's Bush. Coastal turf of sorts also exists near the Onewa off-ramp, but unfortunately these are both likely to be damaged by development, along with shell banks and mangroves.

Species List: * denotes a naturalised plant

Shrubland Community
Ferns
Adiantum cunninghamii
Asplenium oblongifolium
Polystichum richardii

Grasses
Austrostipa stipoides
Cortaderia splendens

Rushes & sedges
Leptocarpus similis

Herbs
Celmisia major var. *major* (streamside)
Linum monogynum

Shrubs
Leptospermum scoparium
Olearia solandri
Ozothamnus leptophyllus p.p.
Phormium tenax

Turf Community
Rushes & sedges
Carex sp.
Isolepis cernua
**Sagina procumbens*

Grasses
**Dactylus glomerata*
**Paspalum vaginatum*
**Holcus lanatus*

Herbs
Apium prostratum
Crassula sieberiana
Disphyma australe subsp. *australe*
Lobelia anceps
**Lotus suaveolens*
**Plantago australis*
Samolus repens
Sarcocornia quinqueflora
Sellieria radicans
Senecio lautus var. *lautus*
**Sonchus asper*
**Sonchus oleraceus*
Taraxacum sp.
Tetragonia trigyna
**Vellereophyton dealbatum*

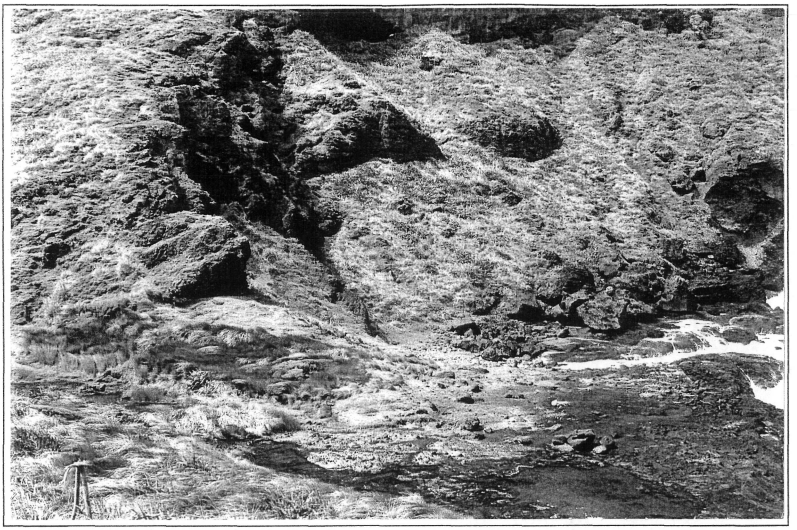

Figure 1. Pareoha Bay, mouth of Cannibal Creek. R. J. Stanley 18 Oct

References
Rogers, G. 1999 Coastal turfs of mainland New Zealand – their composition, environmental character, and conservation needs. Science for Conservation Series 107, DoC.

Acknowledgment Ewen Cameron helped us identify some of the species we found at the Cannibal Creek turf.

Wildflowers along Auckland's Motorways

Mike Wilcox

Geoff and Liz Brunsden, the proprietors of the Tauranga flower seed business Wildflower World Ltd, have for several years been developing the concept of growing wild flowers on road verges. This spring we have seen the first large-scale operational sowings alongside Auckland's Southern Motorway. There have are also been substantial sowings in Northland.

The motorway wildflower project, in which Wildflower World Ltd has worked closely with the Transit New Zealand (motorway managers), Serco Consultancy (site selection and planning), and Fulton Hogan (Auckland) Ltd (site preparation and maintenance), is a large-scale trial to evaluate three likely benefits:

a. Wildflowers beds can save on costly mowing of grass and spraying of weeds.

b. Wildflowers offer a cost-effective and attractive alternative to other kinds of landscaping vegetation (such as shrubs and trees) planting beside motorways.

c. The public enjoy and respect the flowers, the traffic slows down appreciably, and there is less litter.

The sowings have been spectacularly successful, and the flower display along the Southern Motorway this spring has certainly been eye-catching and has prompted much favourable comment. Geoff Brunsden has designed the mix to ensure continuous flowering from early spring to late summer (Brundsen 2000). The species used are mostly North American and European annuals, and are mainly familiar garden flowers (Bryant 1997) or species already naturalised in New Zealand (Webb, Sykes & Garnock-Jones 1988).