

In their early fervour to spread trout, acclimatisation societies also introduce "Babington's curse", the common oxygen-weed *Elodea canadensis*. Since then, other ornamental aquarium and pond species have rapidly escaped and spread.

The most notorious of these are the three other oxygen-weed species (egeria, hydrilla and lagarosiphon) and hornwort (*Ceratophyllum demersum*). As none of these species set viable seed in New Zealand, they rely on regrowth from shoot fragments to spread within catchments. Humans are responsible for spreading these weeds from one catchment to another — often via boats or drain-clearing equipment. Unfortunately some misguided people, especially anglers and duck shooters, deliberately introduce such plants in the mistaken hope that they will attract more birds or increase fish numbers.

### Natives down under

The exploratory scuba survey we carried out of 24 Northland lakes (along with Rohan Wells and John Clayton) showed a sharp contrast between the vegetation of lakes infested with introduced water plants compared with that of purely native lakes. The majority of Northland lakes remain untouched by exotic water plants because of their isolation and unsuitability as trout fisheries.

These native dune lakes are characteristically fringed with tall emergent plants (*Eleocharis sphacelata* and *Baumea* species), with rich carpets of charaphytes (particularly *Chara fibrosa* and *C. corallina*) growing from shallow water through to the deepest limit of plant growth (maximum 17.5 m recorded in Lake Taharoa near Dargaville). Occasionally the rare emergent milfoil *Myriophyllum robustum* may sprawl

Native underwater plants such as *Chara corallina* rarely interfere with our use of lakes because they form a low-growing carpet, unlike exotic species.

Photo: John Clayton



A diver's nightmare, these dense beds of introduced lagarosiphon tend to take over completely from the useful natives they have replaced.

Photo: John Clayton

Close up of the carnivorous native bladderwort (*Utricularia protrusa*), showing the bladders which open and shut to trap tiny animals.

Photo: Rohan Wells

amongst marginal vegetation. Taller growing native pond weeds (*Potamogeton* sp.) and milfoils (*Myriophyllum* sp.) often occur at mid depths, while on sandy, low gradient shores diverse communities of low-growing semi-amphibious plants may occur if sheltered from waves. The latter community commonly includes *Lilaeopsis lacustris*, *Myriophyllum pedunculatum*, *Glossostigma* sp., and more rarely the tiny endangered species *Hydatella inconspicua*. Bladderwort occurs in sheltered sites of some lakes. The bladders of this plant act as traps for small animals which are digested for their nutrients.

