ANUKA – the smaller-growing of the two tea tree species - is hardier and more versatile. It has specialised spongy, air-filled root-tissue which enables it to grow in sour, nutrient-deficient and waterlogged soils. With this advantage it is invaluable for revegetating flood-scoured stream banks, establishing as a shrubland in its own right on permanently wet, sour or badly drained and depleted soils (for example, northern "gumlands"). The same species, however, is also xerophytic - able to thrive on very dry, exposed sites.

Kanuka, with its softer foliage, masses of tiny flowers and seed capsules is the

The alternatives

NTRODUCED tree species offer firewood alternatives and have done so for many years. Some people are fortunate in having ready access to a number of species, much of it "rogue" growth. Gorse, wild cotoneaster, old pussy willow and black wattle are among my favoured exotic wildings.

Macrocarpa sapwood thoroughly dried is excellent kindling and good for a quick hot flame. The tough stringy heartwood of brush wattle (Albizia lophantha) is clean-burning, with good embers. But my favourite is the common wattle (Acacia mearnsii) which has the qualities of tea tree clean-burning, very hot and with good embers. It is faster growing than manuka and kanuka and also coppices vigorously.

There are many other choices. These include almost all the acacia species with A. decurrens having the highest thermal rating, several of the eucalypts including E. saligna for warmer climates and E. nitens for the colder, and Salix matsudana (a species of willow) for wetter sites.

Two less well known species with a high thermal rating are the rapidgrowing tagasaste or tree lucerne (Chamaecytisus palmensis) and the slower-growing but versatile and frost-hardy black locust (Robinia pseudacacia). Then of course, there is the old stand-by, radiata pine, cheap and easy to obtain but not so high in thermal value.

There are other species for use as firewood, especially other acacias and eucalypts. For detailed information get hold of The Firewood Venture (FRI Bulletin 137) from the Forest Research Institute, Private Bag 3020, Rotorua.



Kanuka is an important "nurse" tree in sheltering slower-growing forest species.

aristocrat of the two: rather more particular as to soil and site, and destined for lordly height (up to 16 metres) and spread. Where it shares the first succession stages with manuka it usually outstrips the latter. Kanuka, as "nurse" to secondary succession and the emergence of future broadleaf and podocarp climax forest, is an impressive tree in its maturity (at 50 to 75 years).

Not surprisingly, the larger diameters, many stems and high-crowning of kanuka make it profitable for the firewood contractor. It is also cleaner to handle, more even in quality. Not that manuka is immune; where it predominates it is likely to offer up to 6 metres of branchless stem with convenient diameters of 10-15 cm – no splitting required. Whichever species happens to be targeted when chainsaw, bulldozer and winch start operating, 30 to 70 years of growth is soon destroyed with companion broadleaf and fern species crushed and torn. In the older stands, seedlings of future canopy trees meet the same fate. Bird, insect and reptile habitat is lost. It is unlikely that any but a small proportion of the hundreds (perhaps thousands) of hectares cut annually will be allowed to recover its former

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vegetative balance and completeness. Protective bush is being depleted in water catchments and around the margins of streams and wetlands. The folly goes unchecked, it seems, by either national legislation or local ordinance.

ESOURCE management law in general, and soil and water conservation law in particular, is still skewed toward maximising commercial opportunity; the wider and longterm ecological context of land use tends to be honoured only in preambles. Section 10 of the Resource Management Act is already notorious for its "existing use" clauses.

The first of these clauses gives licence independently of local body ordinance. The second clause places certain limits upon the "use" claimed but in words which should keep lawyers (on both sides of the disputed case) arguing until the rivers run dry. As one of the many kinds of rural "users", firewood contractors are likely to be able to keep cutting until that part of the law at least, is thoroughly revised. If and when that happens it will be up to each local body via its district plan to ensure that protection of natural assets has top priority.

Surviving kanuka and manuka communities may yet enjoy respect - for their own sake and for what they are nurturing, that is, native forests of the future. ❖



Don Chapple is a gardener and retired teacher. He lives on Waiheke Island.

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