ADENANTHOS APICULATA
A FIRE RETARDANT NATIVE

By A. B. Selkirk.

Several years ago when investigating the origin of an uncontrolled fire, I mentally recorded a most unusual retarding effect produced by a procumbent shrub which carpeted the particular spot at the source of the fire.

The fire commenced at the scene of a woodcutter's chain saw operation. In his work of cutting foot blocks from a dry Jarrah log, the cutter had produced a continuous covering of saw chips. These had been ignited from the exhaust and smouldered for several hours until contacting more inflammable leaf litter and bursting away into a fierce 25 acre forest fire. It was very noticeable that where the sawdust and chips had been partly covered, or come into contact with the procumbent shrub, the fire had ceased to burn. The shrub had in fact delayed the break-away for possibly an hour or two, since there was no other scrub on the immediate verge, occupied by the prostrate form.

In recent months I was seeking a low shrub with fire retardant qualities for roadside protection, and preferably a native capable of surviving on lateritic gravel; so I revisited the site of the uncontrolled fire after a spring control burn. Here I found the same thing as I had observed before. In all instances where this shrub grew, the mild spring burn had ceased to run, even though in many cases the shrub was heavily covered with Jarrah leaf litter.

Each shrub appeared to give the same protection that one would expect from a shallow pool of water. Small Bossia and Dryandra floribunda specimens growing within the matted runners were protected. The short lateral shoots seemed to have the power of growing vertically and eventually enveloping all litter that fell in summer, as the plant made vigorous summer growth. There appears to be no layering of roots from the lengthy runners and some attain a length of eight feet on the radius. The runners can be rolled back in a swathe, revealing the decomposed litter in the form of fine duff, overlaying a rather infertile laterite gravel. In doing this I realised I was looking at a plant that had survived at least 15 years of rotational burning, and was covering approximately 50 square feet with a basal stem as thick as a man's wrist. I tried dropping fusee matches on the litter covered runners, but they spluttered, popped and went out. I put some in a blow flame; it glowed red after spluttering, gave a short flame and went cold and black when the blow flame was removed.

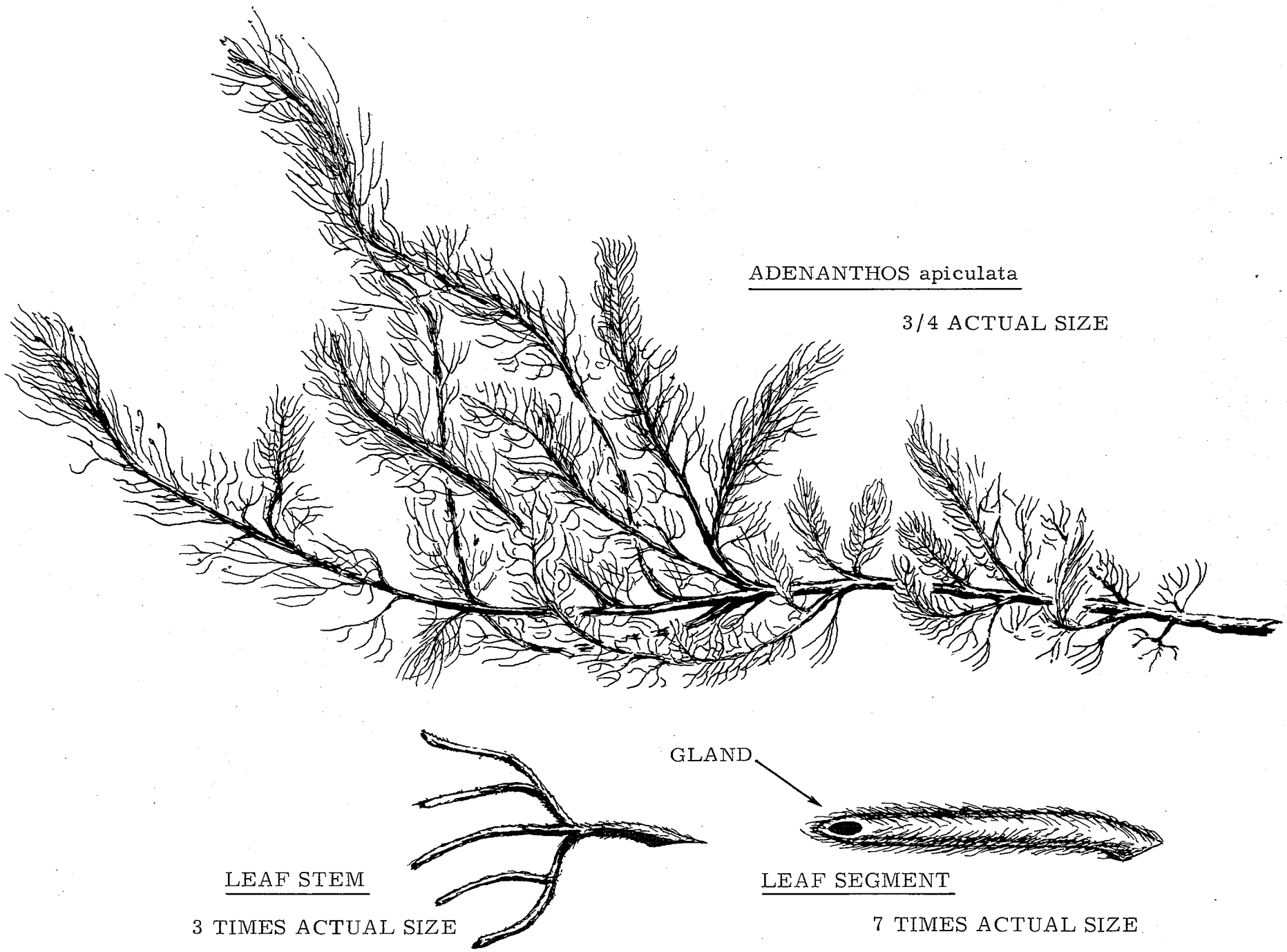
The correct identification is difficult; the closest so far is Adenanthos apiculata, and it seems very restricted in its habitat in the Mundaring District. In fact, it covers only about 40 acres.

With the transfer of small wildlings to roadside observation plots and experiments with fertiliser, it is hoped to find out what use this native may be in fire control.

At present, it appears it could be useful in:

A. High risk roadside areas;
B. Bowl and stem protection of fire tender species in parkland sections, as it seems to thrive under a canopy;
C. As a decorative procumbent in native garden landscaping;
D. It may be even more useful if grown in conjunction with the other very similar erect form, Adenanthos drummondii.

A small sketch of the plant is appended.


ADENANTHOS apiculata
3/4 ACTUAL SIZE
GLAND
LEAF STEM
3 TIMES ACTUAL SIZE
LEAF SEGMENT
7 TIMES ACTUAL SIZE