EUC. ASPERA SEED SURVEY 23-1-1981

INTRODUCTION:

Euc. aspera is a medium sized tree reaching 6 to 12 metres with a spreading dark green crown and gum barked bole and branches.

Best development occurs on red sands and alluvial sandy loams of the Pilbara, although fine specimens grow successfully on sandstone ridges in the Tanami Desert.

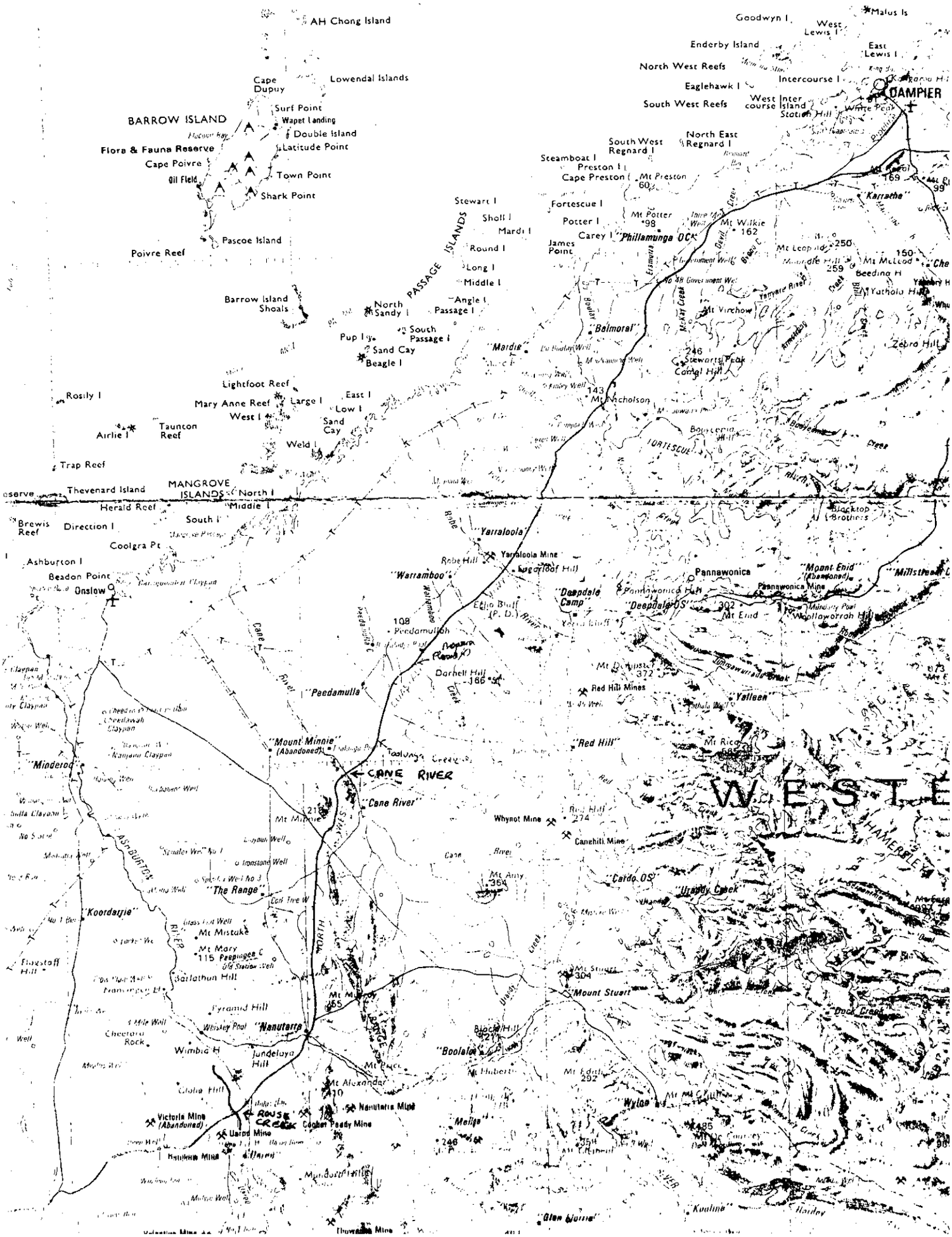
This species has fine attributes for amenity planting but lack of seed collection has hindered planting trials.

Experience has shown that seed crops are sparse and what seed develops is shed quickly during the summer months.

Photo of mature tree - Rouse Creek, 295 km. south of Karratha.

EXTENT OF SURVEY:

Situation Map.



ZONE COVERED BY SURVEY:

The survey extended 300 km. S.W. from Karratha to Rouse Creek along the N.W. Coastal Highway.

All stands of Euc. aspera were recorded and most of the major stands were inspected for capsule development.

The closest confirmed stand to Karratha is 127 km. south or 15 km. south of Fortescue River.

During the survey 22 discrete stands were located ranging from a few trees to large populations adjacent to floodways and river courses.

A more comprehensive survey would locate more trees.

Associated species are Euc. dichromophloia, Euc. coolabah and Euc. camaldulensis.

FLORAL STATE:

Bud initials had been noticed in November 1980.

Green capsules and some flowers were recorded at Rouse Creek on 6th. January 1981 (site 22 NW).

The inspection on 23rd. January revealed that over 75% of these (site 22 NW) had "ripened" and shed the contents of capsules.

During the survey, an estimated 5% of trees were carrying capsules. Of these, only a small proportion could be classified as moderate to heavy yields.

A few flowers and small capsules were seen but maturing capsules is the dominant floral state. Under some trees, there were large quantities of buds which had aborted.

Heavy development of capsules, tree site 10, 195 km. south of Karratha.

Heavy development of capsules on a tree at site 17, 267-7 km. south of Karratha.

ANTS:

Trees with heavy capsules were invariably covered with small black ants. These were seen streaming up the bole and appeared to be concentrating their efforts amongst the capsule clusters. This led me to the conclusion that there could be exudates from this zone. They may also have had a part to play in the pollination process.

TREE CONDITION:

Most trees were in the process of apical shoot growth.

This was very evident where rainstorms had occured over the last month or so. On more fertile sites adjacent to creeks, trees carried larger crowns.

Photo - Healthy young Euc. aspera with new crown, site 10, 195 km. south of Karratha. Recent rainfall is apparent.

CAPSULE RIPENING:

Capsules inspected on Monday 6th. January, 1981 at Rouse Creek were very green and flowers were still present (site 23 N.W.) 298 km. south of Karratha.

These same capsules inspected on Friday 23rd. January were 75% shed.

I believe that rapid ripening, a characteristic of Euc. aspera, is hastened by the dry desert winds, lack of rain and ground moisture dictated by the site. There is no evidence of recent rain at this site.

Conversley, a good season will encourage the development of fruiting bodies but unless soil moisture is maintained, buds will abort. This critical moisture factor, carries through the capsule maturing phase probably determining the size and quality of the seed crop.

A second tree (22 S.E.) had a heavy crop of capsules which were opening. The green capsules were changing to a distinct yellow colour and the disc was splitting to reveal the valves without any sign of brown colouration. Once the capsules opened they turned to a light brown colour.

An adjacent tree (22 S.E.) had shed all its seed; half the capsules were on the ground.

Another site at Cane River (site 14) 215 km. south of Karratha, shows more promise for seed collection than site 22. The trees are well developed and a number carry green capsules. An important fact, I believe is that the area has had good recent rain. It also collects water from the "road catchment". The spinifex is dark green and coming into ear.

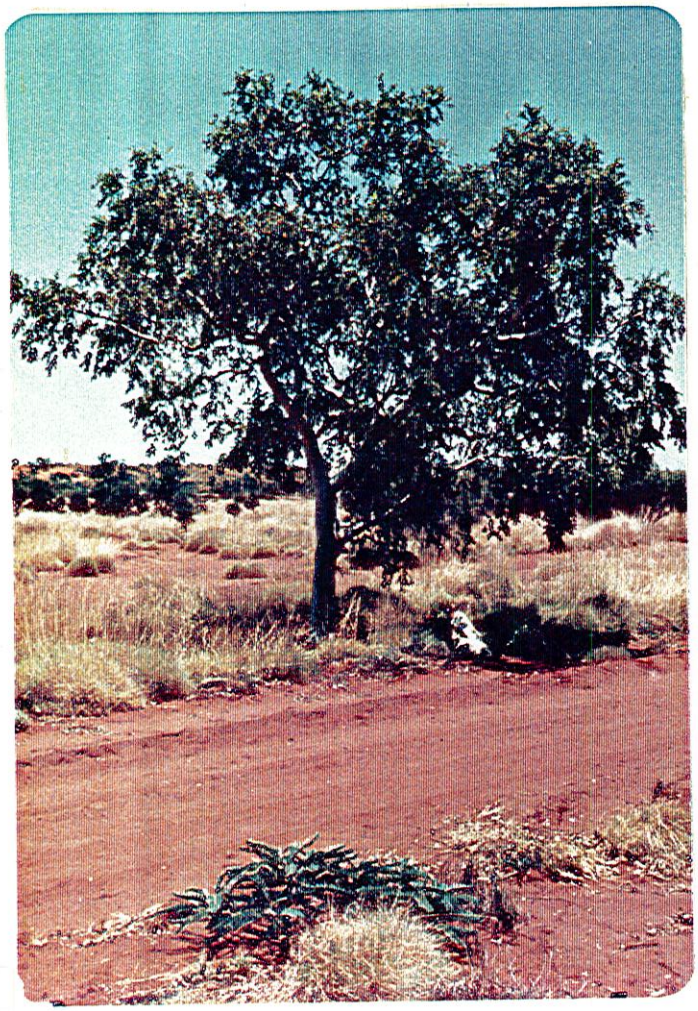
I am expecting the capsules to ripen more steadily and mature well at this site.

FIRE:

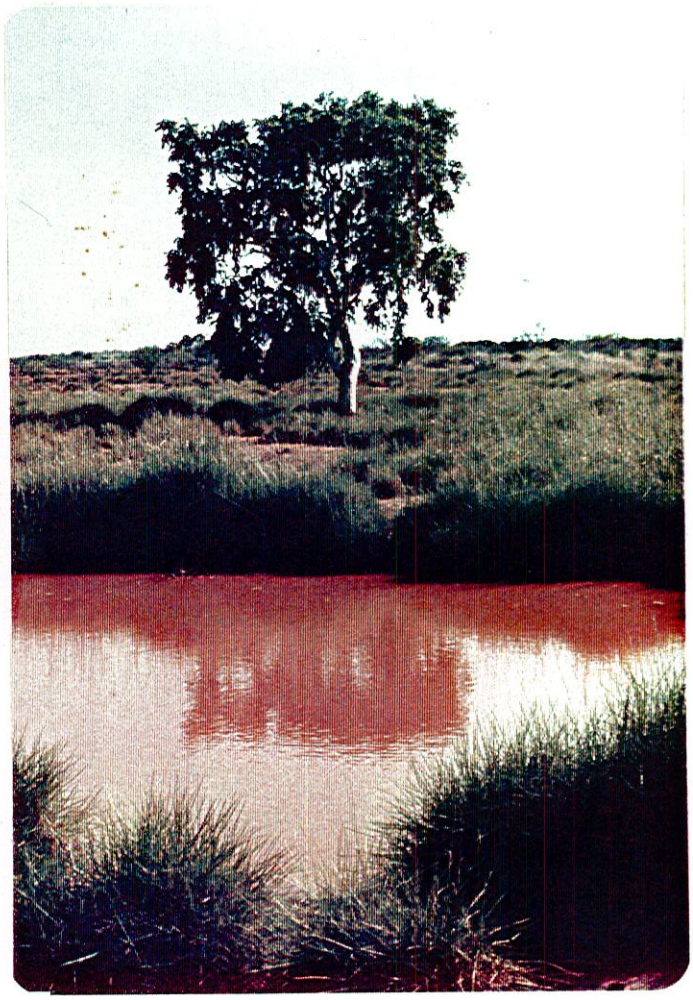
Along the highway there are a number of sites, including areas of Euc. aspera which have been burnt off.

Although gum barked, Euc. aspera seems quite fire resistant.

Observations on Euc. coolabah (Karratha) and Euc. camauldulensis (Alice Springs) suggest these by comparison are sensitive.



Seed source Euc. aspera site 22 S.E.



Euc. aspera at Cane River, where recent rains have fallen.

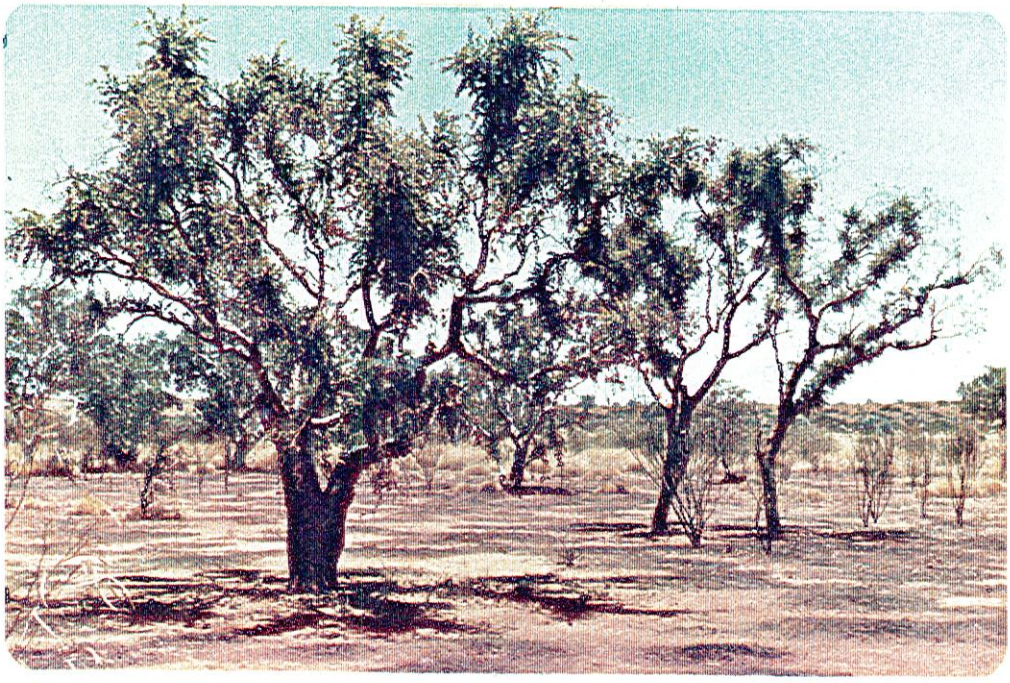


Photo - Euc. aspera tree recently burnt and recovering strongly.

SEED COLLECTED:

Three collections of Euc. aspera capsules were made. Some capsules were open and some may be immature. All were covered with small ants.

Approx. wght. of capsules.		Location
(a)	0. 4 kg.	Site 22 N.W. 298 km. south of Karratha.
(b)	0. 4 kg.	Site 22 S.E. 298 km. south of Karratha.
(c)	o. 2 kg.	Site 17 Panawonica turn off. 5 km. north of Nanutarra or 267-7 km. south of Karratha.

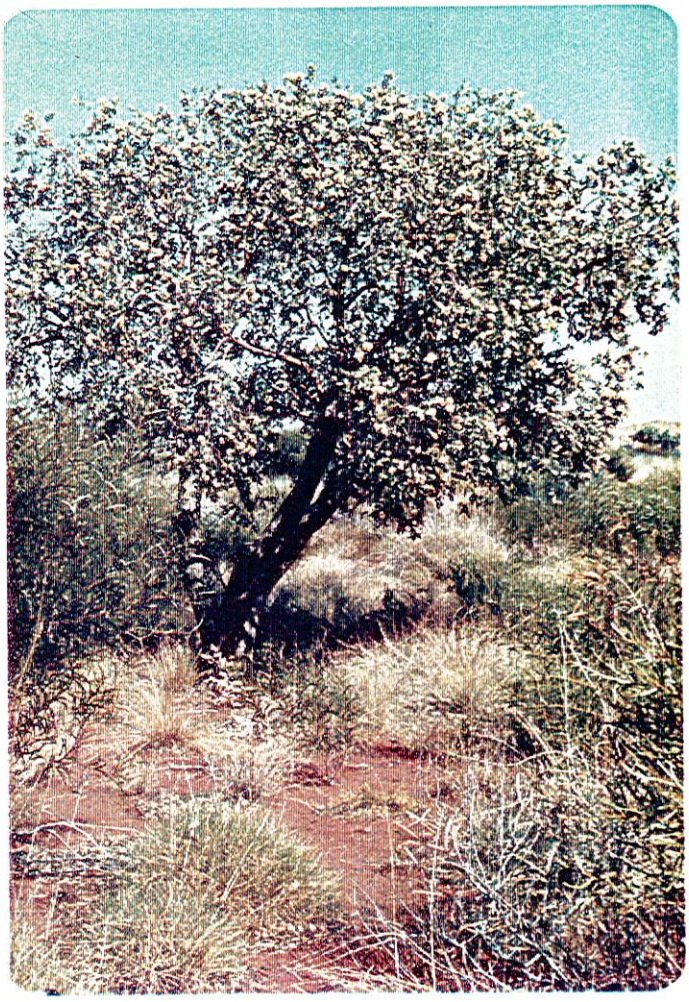
(d) Also collected was 100 grms. of Euc. camauldulensis capsules from a large tree near the Rouse Creek bridge.

I am not convinced of their maturity so did not make an extensive collection.

SEED YIELDS:

(a) ≒ 40gms
(b) ≒ 40 gms
(c) ≒ 20 gms.

Euc. camaul dulensis tree seed source, 295 km. south of Karratha.



Euc. setosa flowering, 246.1 km. south of Karratha.

W.B. Edgecombe
Karratha
3/2/81.