

NOTES ON TWO MANGROVES OF THE RHIZOPHORACEAE FAMILY AT COOKTOWN, NORTH QUEENSLAND

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The mangrove community at Cooktown is a rich and diverse one, associated with two major river systems. The township is situated at the mouth of the Endeavour River while only seven kilometres to the south there is the Annan River. The minor Esk River converges with the Annan River near its mouth.

At least 25 true mangrove species have been identified by the author so far in these three river systems.

Brief notes are made here concerning two species with limited known distribution along the northern Queensland coastline, neither of which has previously been recorded from Cooktown.

The first species *Bruguiera cylindrica* (L.) Bl. (nomenclature follows that used by Bunt, Williams and Duke 1982), commonly known as Small-fruited Mangrove, was found during May 1987, when approximately 54 small trees were found growing at a protected site alongside the Annan River halfway between the river mouth and the Cooktown & Cairns roadbridge, on the north side of the river at 15°32'S, 145°15'E. An examination of some floral parts from the trees revealed characteristics of the calyces different to those of other local *Bruguiera* species. Some spreading calyx lobes stood out at right angles from the base of the hypocotyls, while others curved backwards. Other differences were noted in the trees including the loose, cork-like, bark on the base of the boles. This stand of *Bruguiera cylindrica* averaged approximately 5 to 7 metres in height and was associated with *Avicennia* sp., *Ceriops tagal* var. *tagal*, *C. tagal* var. *australis* and *Excoecaria agallocha*. They were growing in substrates of firm, coarse sand and mud at the mean high water zone. Close by, terrestrial vegetation prevailed. Specimens of this species were sent to the Queensland Herbarium which confirmed the identification as *Bruguiera cylindrica*. The following year a second site of the

same species was located on the southern bank close to the confluence of the Esk and Annan Rivers. This stand comprised at least 50 trees, generally of shorter stature and more scattered in distribution than those from site one, growing in mainly sand near the edge of the beach. Other mangrove species close by were *Aegiceras corniculatum*, *Ceriops tagal* var. *tagal*, *C. tagal* var. *australis*, *Excoecaria agallocha*, *Xylocarpus granatum*, *X. australasicus*, *Heritiera littoralis* and a *Capparis* species. Some small trees amongst this stand, barely 2 metres high, bore viviparous seedlings. Later in June 1991, on the Upper Endeavour River at approximately 15°27'S, 145°12'E, a third site was found supporting only a solitary tree which was in flower. It was growing in similar substrates to those at site one on the Annan River, but unlike the previous sites, this site was subject to the influx of fresh water.

The second species of consequence is *Ceriops decandra* (Roxb.) Ding Hou (Bunt, Williams and Duke 1982) commonly known as the Rib-fruited Spurred Mangrove. This species was first located during July 1992 from the Endeavour River at approximately 15°28'S, 145°14'E. Only three small trees of 2 to 2½ metres in height were observed on a small, protected sand ridge just above the high tide zone. This species was distinguished in the field at first glance by the calyx lobes not being free from the base of the calyx, but arising a third of the way along the calyces. *Ceriops tagal* var. *tagal*, *C. tagal* var. *australis* and occasional *Thespesia populnea* trees grew nearby. The identification of *C. decandra* was confirmed by the Queensland Herbarium. During the same month a second site was located six kilometres to the north at a small unnamed creek near Mount Milman at 15° 24'S, 145°15'E. Five trees between 2 to 3½ metres in height were found at this site within the high tide zone. Substrates consisted of both firm mud and sand. Associated mangrove

species were similar to those at site one but also included a few *Bruguiera gymnorrhiza*, *Rhizophora stylosa* and occasional *Xylocarpus australasicus*. Later, in November 1992, a solitary 3 metre high tree was located growing in the *Bruguiera cylindrica* stand at the Annan and Esk River junction.

The *Bruguiera cylindrica* record for Cooktown represents the most southerly known location for the species. Busby and Bridgewater (1986) and the Queensland Herbarium previously cited its known distribution at approximately 90 kilometres north of Cooktown near Point Lookout.

The Cooktown record of *Ceriops decandra* has bridged a large gap between the previous known records on the Daintree River, 100 kilometres to the south, and the Annie River at Princess Charlotte Bay, 180 kilometres to the north.

It is highly probable that further stands of both these mangrove species will be found after further searches both to the north and south of Cooktown.

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REFERENCES

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