Xanthorrhoea acanthostachya (Xanthorrhoeaceae), a new species of the Perth Region, Western Australia

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Abstract

Bedford D. J. *Xanthorrhoea acanthostachya* (Xanthorrhoeaceae), a new species of the Perth Region, Western Australia. Nuytsia 5(2): 317-321 (1984). *Xanthorrhoea acanthostachya* is described and illustrated. It is distinguished from other *Xanthorrhoea* species in Western Australia by the combination of very elongated, prominent clusterbracts and subulate floral bracts and from *X. australis,* its nearest relative, by its scape length to spike length ratio and leaf colour. Very few examples of the species are known.

Xanthorrhoea acanthostachya Bedford, sp. nov. (Figures 1-3)

X. australi similis, sed scapo plus minusve spicam aequanti et foliis viridibus vel minus glaucis differt. A speciebus Australiae Occidentalis bracteis fasciculorum conspicuis elongatissimus ad maturitatem et bracteis floralibus subulatis distinquenda.

Typus: Chatfield Rd, South Western Highway, Western Australia, 24 Nov. 1982, *D. J. Bedford* 4 and *T. D. Macfarlane* (holo: NSW; iso:PERTH).

Trunk short to 1.5 m tall, crowns 1 to 2. *Leaves* (terminal) in more or less hemispherical crowns, 60-70 cm long, quadrate-rhombic in transverse section, 2-2.25 mm wide and 1.5-2 mm thick, green to slightly glaucous. *Leaf-base* swollen and rigid at the junction with the leaf. Scape 40-50 cm long, 7-16 mm diam. *Spike* usually more or less equal in length to scape, (20)40-50(90) cm long and 20-40 mm diam., prickly in appearance. *Cluster-bracts* very elongated, subulate in shape, dilated at the base, usually very prominent (occasionally slightly prominent), glabrous, rarely subglabrous. *Packing-bracts* (floral bracts) subulate in shape, often twisted or folded, subglabrous to glabrous (except for occasional large bracts, which have a line of hairs along the centre of the back and hairs at the margins below the tip). *Sepals* short, acute, with short beak at the tip, glabrous except for a tuft of hairs in the beak. *Petals* more or less erect at anthesis, sometimes beaked, with an adaxial proboscis, soft and membranous, glabrous except for short hairs in and around the tip, and hairs covering the proboscis. *Fruit* acute at the tip with a persistent long style-base-point, dark brown at maturity. *Seeds* dorsi-ventrally flattened, narrow ovate to ovate (Systematics Association (1962) figures 37-38), triangular in median transverse section, semi-matt black, 11-12 mm long by 4.5-5.5 mm wide, when fully mature. (Terminology as per Lee (1966a and b) and Systematics Association (1962)).

Other specimens examined. WESTERN AUSTRALIA: Harvey Dam Reserve, 13 Nov. 1981, *T.D. Macfarlane* 659 (PERTH); Keysbrook, Nov. 1900, *W.V. Fitzgerald* NSW 154569 (NSW); 5 miles E of Mogumber, 25 Aug. 1970, *K.M. Allan* s.n. (spirit collection only) (PERTH).

Distribution. At present *X. acanthostachya* is known only from four sites in the Perth Region of W.A. as defined by Marchant and Perry (1981).

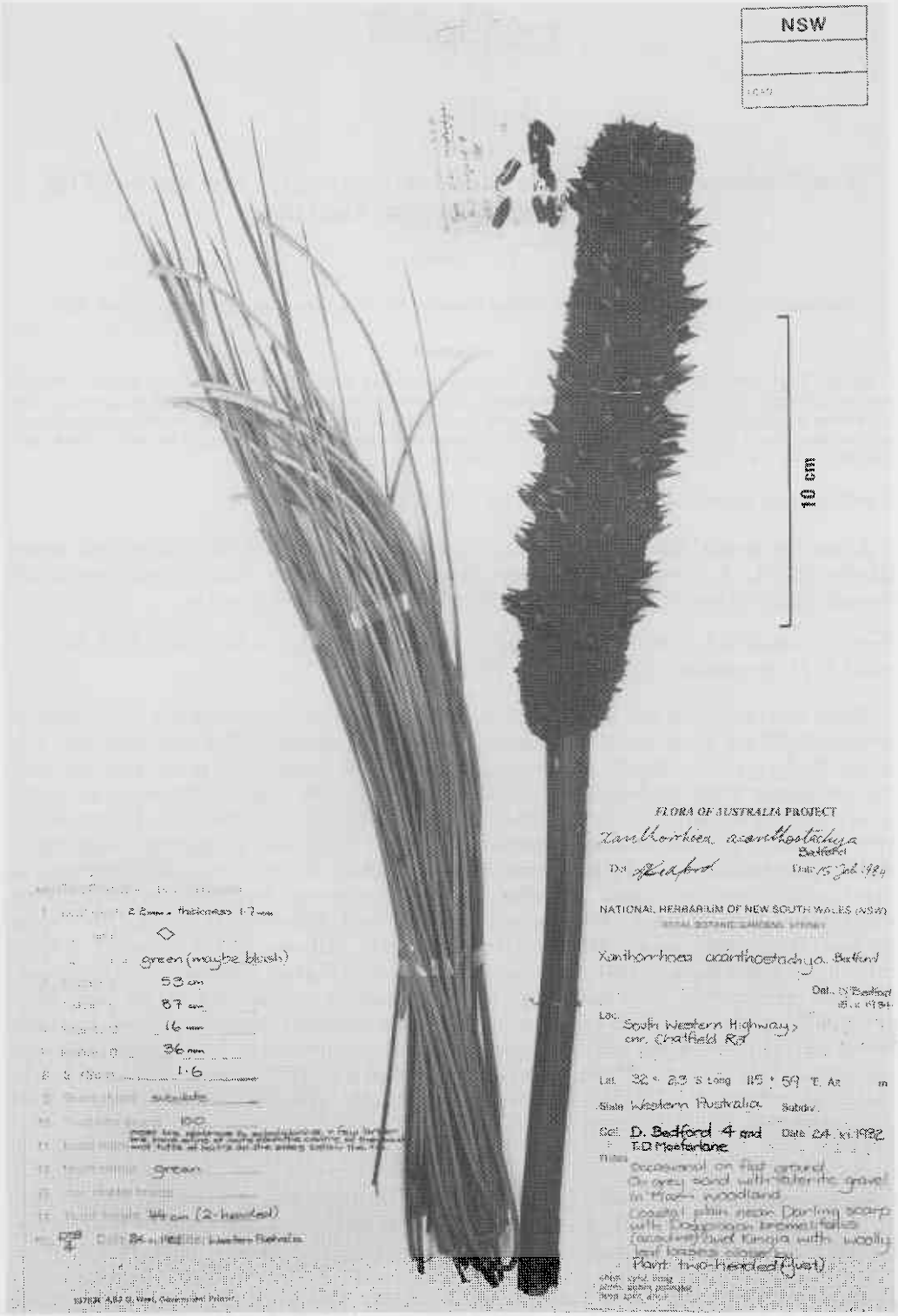

Figure 1. *Xanthorrhoea acanthostachya*, holotype specimen in herb. NSW.

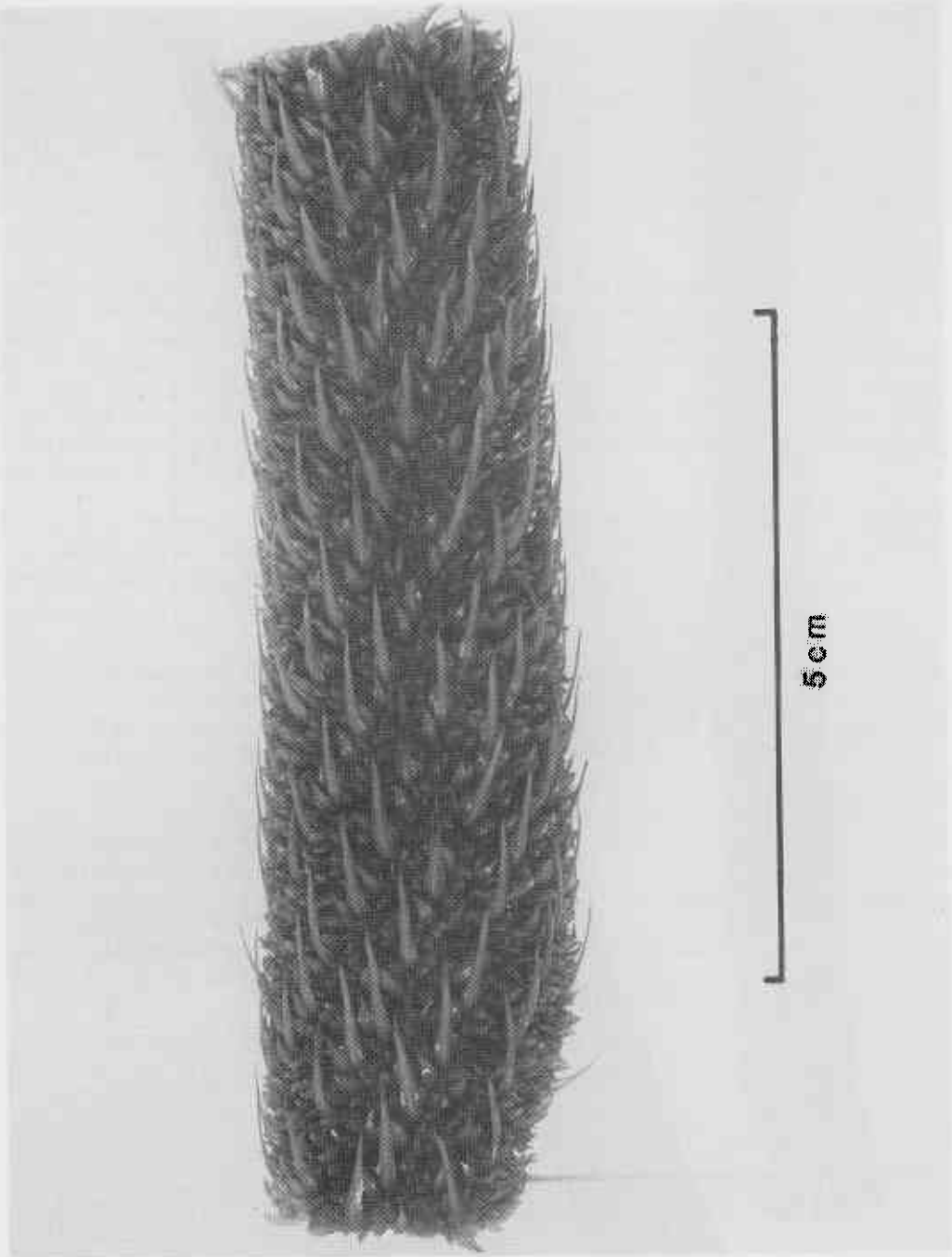

Figure 2. *Xanthorrhoea acanthostachya*, close-up view of immature spike, showing very prominent cluster-bracts. *K. M. Allan* s.n., 5 miles E of Mogumber, W. Austral., 25 Aug. 1970.

Ecology. The species occurs on the coastal plain in grey sand overlain by lateritic gravel, often with *Dasypogon bromeliifolius* and *Kingia australis*, and on steep slopes in stony lateritic soil in Jarrah (*Eucalyptus marginata*) woodland.

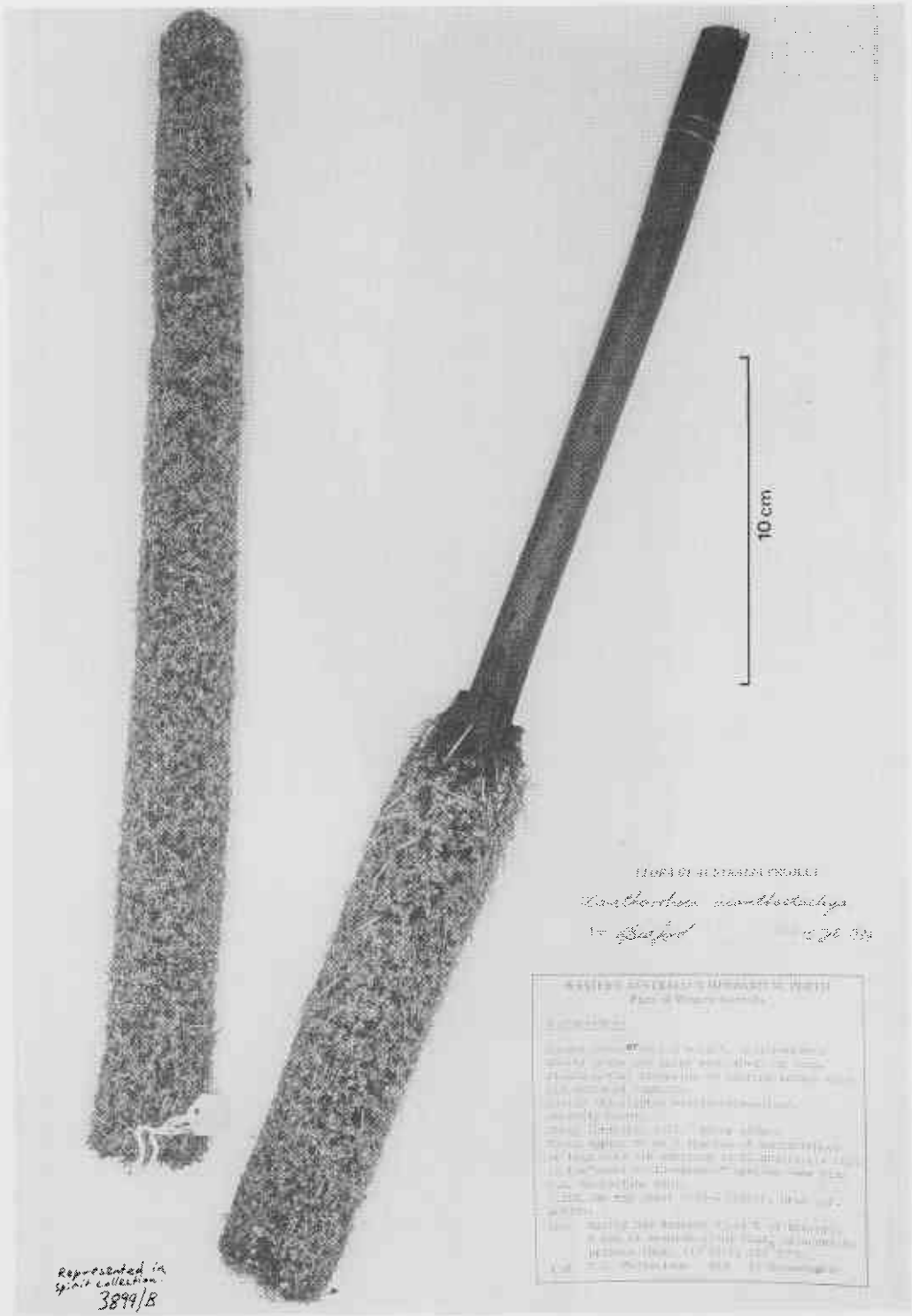

Figure 3. *Xanthorrhoea acanthostachya*, mature flowering spike showing exceptionally long prominent cluster-bracts. *T. D. Macfarlane* 659, sheet 1.

Flowering period. Young flowering spikes have been collected in August and flowering and recently fruiting spikes have been collected in November.

Affinities. There are no obvious allies of *Xanthorrhoea acanthostachya* in Western Australia, although its leaves are at least superficially similar to those of *X. preissii*. *X. australis* of eastern Australia has similarly shaped bracts and leaf cross-sectional shape, and is therefore probably the most closely allied species. *X. semiplana* of South Australia has similarly shaped floral bracts to *X. acanthostachya* but is a much more massive plant with large broad transverse-rhombic median transverse section leaves.

Xanthorrhoea acanthostachya differs from *X. australis* in (a) scape length to spike length ratio; *X. acanthostachya* has scape length more or less equal to spike length, *X. australis* always has a much shorter scape than spike (less than ½ the length), (b) leaf colour; *X. acanthostachya* has green to slightly glaucous leaves, *X. australis* has very glaucous leaves, (c) sepals; *X. acanthostachya* has short, acute sepals, with a short beak at the tip, without a proboscis in the beak, *X. australis* has subulate shaped sepals with a long narrow beak at the tip, often with a proboscis in the beak, (d) petals; *X. acanthostachya* petals sometimes have a beak, *X. australis* petals never have a beak.

Etymology. The specific epithet is from the Greek *akantha*, meaning a thorn or prickle, and *stakhys*, an ear of grain or a spike, in reference to the distinctly thorny or prickly appearance of the spike due to the prominent cluster-bracts.

Acknowledgements

I wish to thank Dr Terry Macfarlane for help with my field studies on *Xanthorrhoea* in Western Australia, Mrs Karen Wilson for advice with the Latin diagnosis and Ms Anna-louise Quirico for technical assistance. The research and field work were undertaken with the aid of a grant from the Australian Biological Resources Study.

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