Despite an increase in exploration of the Kimberley region in recent decades, the plant diversity is still considered to be poorly known. In 1992, the *Flora of the Kimberley Region* recorded just over 2,000 plant species in the region. Since then, that number has climbed to 3,000 species and continues to grow. Even in regions considered well known and close to towns such as Broome and Kununurra, new species continue to come to light. The largest number of new species are being found on the sandstone plateaux of the north-west Kimberley, in the high rainfall zone (1,000–1,400 mm p/a). Many of these species are wet season ephemerals, and are completely missed by dry season visitors. We have utilised helicopters, remote bush camps and station homesteads to survey many remote parts of the Kimberley in search of unknown plants. Not all of the new discoveries are small or annuals, with new acacias and the occasional new eucalypt still coming to light. We suggest that there are still hundreds of new species awaiting discovery in the region, most of which are likely to be endemic and deserve protection through conservation measures. We will take you well beyond the Gibb River Road to present highlights of our discoveries and the incredible landscapes of the region. From the world’s only non-carnivorous carnivorous plant, to dead-horse lilies, and a mock orange that was ‘lost’ for 180 years, the Kimberley flora is very unique. We will show how this flora compares to the remainder of Australia and discuss the threats currently facing the region.

Molecular phylogeny of *Boronia* and *Boronella* (Rutaceae) using chloroplast and nuclear markers

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As currently circumscribed, *Boronia* (Rutaceae) is a large Australian genus of 149 species distributed across all States and mainland Territories. It is particularly diverse in south-western Western Australia, with minor centres of diversity in south-eastern Australia, the Top End of the Northern Territory and the Kimberley. *Boronella* is confined to New Caledonia and contains six species. The two genera have a complicated taxonomic history, with various accounts indicating they should be combined or moved to different tribes. Recent molecular phylogenies indicate the genera are closely related, though isolated from the other genera traditionally placed in tribe Boronieae, and more closely related to Australian rainforest genera. To test the relationships of the two genera and of the sections in *Boronia* a phylogeny was produced using chloroplast (trnL-trnF) and nuclear (ITS, ETS) DNA sequences. Results indicate that *Boronia, Boronella* sections *Algidae, Valvatae* and *Cyanothamnus*, and series *Pedunculatae* (section *Boronia*) are monophyletic. Section *Boronia* is paraphyletic; nested in it are *Boronella*, section *Algidae* and the monotypic sections *Alatae* and *Imbricatae*. Series *Boronia* is polyphyletic and a number of more natural groups were identified. These results are congruent in part with previous studies using morphological data and indicate a broader concept of *Boronia* is required. A key implication of the study is that a narrower circumscription of section *Boronia* is necessary and that both *Boronella* and *Boronia* series *Pedunculatae* require recognition at the sectional level. The status of the three remaining small sections and several species currently placed in series *Boronia* requires clarification.
Program and Abstracts

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