Endangered Melicope

The genus Melicope (Rutaceae) comprises of about 230 species. Its distribution ranges from SE Asia, the Malesian region, Australia, to Pacific islands, including the Hawaiian Islands. Melicope also occurs in Madagascar and the Mascarene Islands. The centers of species richness and endemcity in Melicope are New Guinea with 58 species (44 endemic), and the Hawaiian Islands with 48 endemic species (Appelhans et al, 2012).

Thirty two Melicope species have been assessed using IUCN Red Categories and criteria, most of these species are endemic to islands in the Pacific region -the Hawaiian Islands and French Polynesia. Of the 32, 25 species are classified as ‘Threatened’ (Critically Endangered (CR), Endangered (EN) and Vulnerble (VU)); four species are declared Extinct EX, two Near Threatened (NT) and one of Least Concern (LC).

While the cause for the extinction of the four Melicope species in the Hawaiian Islands (M. cruciata, M. haleakalea, M. obovata, M. paniculata) has not been specified, invasive alien species are listed as one of the major threats to the survival of the CR M. haupuensis, M. knudsenii, M. mucronulata, M. quadrangularis and M. zahlbruckneri (herbivory by goats, seed predation by rats and competition and habitat alteration due to the spread of invasive alien plants). These species have also been listed in the annex of the US Endangered Species Act.

M. degeneri endemic to the island of Kaua’i was recovered in 1993 and is currently known from only 22 individuals. Woods (2011) describes the rediscovery, conservation status and taxonomic assessment of this species including threats. Woods (2011) reports that a formal IUCN assessment of this species has been complete and it is now ranked as CR (however, this species is not as yet listed in the IUCN Red List database). One of the major threats to all its populations includes the impacts of invasive alien species -habitat degradation by pigs (Sus scrofa), seed predation by Polynesian and black rats (Rattus exulans and R. rattus), and competition with invasive alien plants such as Bryophyllum pinnatum, Erigeron karvinskianus, Hedychium gardnerianum, Paspalum urvillei, Rubus rosifolius, Lantana camara and Psidium guajava.

References: