

## **Diversity in *Cumulopuntia sphaerica***

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The genus *Cumulopuntia* in Peru is poorly studied and in *The New Cactus Lexicon* only *Cumulopuntia sphaerica* and *C. boliviana* are accepted as good species. In this publication *C. sphaerica* includes no less than nineteen published taxa (including some only published in the genera *Opuntia* and *Tephrocactus*) and in this wide sense encompasses all the taxa in S Peru and N Chile on the western side of the Andes. The distribution extends from Lima, Peru, in the north to Coquimbo, Chile, in the south.

During three field trips to southern Peru I have encountered specimens of *Cumulopuntia* in a number of localities and observed significant differences in vegetative morphology. Subsequent research identified a number of these populations as taxa that had been described as distinct species by various authors, and it is clear that including all under the single name *Cumulopuntia sphaerica* is in need of re-evaluation. Generally there is little diversity in plants within populations but significant diversity between populations. Several are clearly distinct taxa and some grow in association with other taxa without introgression. A tentative classification with four additional species is proposed with *C. sphaerica* retained to include only the large segmented plants from a number of low elevation localities (<2600m) from Arequipa northwards to Lima.