

Supplementary material to the paper Montenegro-Hoyos A et al. Plant diversity and structure in desert communities of the Andean piedmont in Ica, Peru. Vegetation Classification and Survey. DOI: <10.3897/VCS.68006>

Supplementary Material 7. Notes on the ecology and distribution of the main new records for the Ica department, Peru.

Family	Species	Notes	Recorded locality
Asteraceae	<i>Grindelia brachystephana</i>	Initially reported for Argentina (Cabrera 1931) at 1,100 m, in habitats that included dry environments and alkaline or saline wetlands (Moore et al. 2012). According to TROPICOS it is found in the southern cone of Peru, but there is no record of specimens deposited in collections, so there is an information gap on Peruvian populations.	Huancacasa
Cactaceae	<i>Austrocylindropuntia subulata</i>	Native species from Peru, which is distributed from the coastal to the semi-arid zones of the Andes in the departments of Lima, Cuzco, Puno, Huánuco and Arequipa, ranging from sea level to 4,001 m (Montesinos 2016; Quispe-Apaza 2020;).	Huancacasa
Euphorbiaceae	<i>Cnidoscolus basiacanthus</i>	Locally known as Huanarpo hembra, and it is considered vulnerable according to Peruvian legislation (Ministerio de Agricultura y Riego 2006). However further studies on its populations are required to validate this conservation category (León et al. 2006). It was registered in the departments of Cajamarca and Lima between 1,000 to 2,000 m, then it was reported for the department of La Libertad (Rodríguez et al. 2018).	La Bolivar

Euphorbiaceae	<i>Jatropha macrantha</i>	Peruvian endemic species locally known as Huarnapo macho (Brako and Zarucchi 1993). However, no studies have validated or evaluated the presence of this species in other areas out of Peru (León et al. 2006). According to TROPICOS it is widely distributed along the Peruvian Andean highlands, above 1,350 m, in the departments of Ancash, Arequipa, Cajamarca, Huánuco, La Libertad and Lima. This species is also classified as vulnerable for Peru (Ministerio de Agricultura y Riego 2006), due to intense harvesting for medicinal purposes (Hidalgo et al. 2014) and requires increased knowledge about the distribution and conservation status of extant populations in La Bolivar, as well as other areas in Peru.	La Bolivar
Pteridaceae	<i>Adiantum poiretii</i>	A variable species widespread in the Neotropics, mid-Atlantic islands and Africa, and belonging to a complex of species including also <i>A. raddianum</i> , <i>A. lorentzii</i> and <i>A. digitatum</i> . To date, <i>A. poiretii</i> has been collected in several regions in Peru, from desertic, lomas and thicket environments (Tryon and Stolze 1989), but there clearly is a need for further collections to resolve the taxonomic issues surrounding this species complex in southern South America and to accurately map their distribution (Sundue et al. 2010).	Huancacasa
Pteridaceae	<i>Astrolepis sinuata</i>	A widespread species in North and South America (Benham 1992). It belongs to a clade of ferns that has colonized and diversified in arid environments (Rothfels et al. 2008). In Peru, this species has been usually recorded above 1,000 m elevation in coastal and Andean dry forest or open scrub (Tryon 1964; Montesinos et al. 2015).	Huancacasa

Pteridaceae	<i>Cheilanthes mollis</i>	A xerophytic species reported in Chile and in lomas of southern coastal Peru (Tryon 1964). Very few specimen records are available for Peru.	Huancacasa
Pteridaceae	<i>Pellaea ternifolia</i>	A widespread species from the southeastern USA to Argentina. In Peru it has previously been recorded in several regions, although the closest records to our site are to the north in Lima (León and Valencia 1988) and to the south in Arequipa (Montesinos 2016).	Huancacasa
Rosaceae	<i>Hesperomeles obtusifolia</i>	Most species in the genus are montane and high Andean (Pennington et al. 2004) with several collections along the eastern Andes. However, some collections of this species are from dry scrubs on the western Andean slopes in La Libertad and Lambayeque Departments (specimens Leiva 316 and Díaz 2104 at the Missouri Botanical Garden Herbarium, TROPICOS) and at elevations between 2,000 and 2,350 m. The few individuals we found suggest they are planted and do not constitute a natural population, but further surveys are needed to confirm this.	Huancacasa
Rosaceae	<i>Kageneckia lanceolata</i>	A relatively widespread Andean species occurring in dry valleys (from Amazonas Department in northern Peru to northern Argentina). Where it occurs, it is usually in small numbers (Romero 2019), this being the reason for being considered critical by Peruvian legislation. We found only one previous published reference of this species in Ica. Galán de Mera et al. (2009) reported it at lower elevation in the Nazca plains (507 m), whereas our record is from above 2,600 m.	Huancacasa

Solanaceae	<i>Nolana weissiana</i>	Considered endemic to Arequipa, it is distributed in lomas formations. Until 1984 it was reported for elevations of up to 450 m (León et al. 2006), but additional collections extended the altitudinal range up to 1,300 m (Ferreyra 7232 specimen at the Universidad Nacional Mayor de San Marcos Herbarium); Rosado-Arce 2019). Here we expand this range above 2,600 m and its distribution further north from Arequipa into the locality of Huancacasa.	Huancacasa
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