

Galapagos Islands, Ecuador

Native and Endemic Plants of Floreana Island

Walter Aurelio Simbaña Ayo

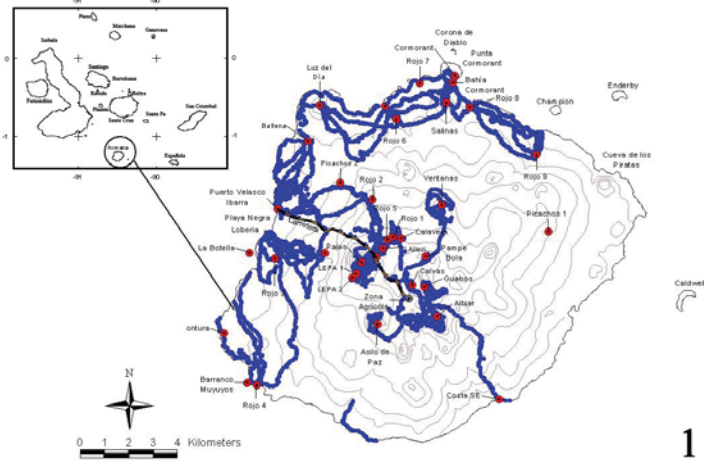
Charles Darwin Foundation, Puerto Ayora, Galapagos & National Biodiversity Institute, Quito, Ecuador

Photos: Walter Simbaña and Alan Tye (photos 23, 31 and 44). Produced by: Walter Simbaña [walters53@hotmail.com]. Acknowledgments: the Charles Darwin Foundation, the staff of the Galapagos National Park's Floreana Technical Office, and local field assistants. * indicates extinct plants.

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1



2



3

Figure 1. Location of Floreana island within the Galapagos Archipelago. Blue lines indicate the tracks of the field explorations of different sectors and hills (red circles with black point). **Figure 2.** Puerto Velasco Ibarra with Cerro Pajas in the background, during the *garúa* season, October 2018. **Figure 3.** Dry Zone vegetation, northeast coast of Floreana, taken from the summit of Cerro Salinas during the warm rainy season, February 2008. The dominant tree with green leaves is *Bursera graveolens*.

Floreana Island, also known as Santa María, Charles or King Charles II, is located in the south of the Galapagos Archipelago (Fig. 1), about 1000 km from the mainland coast of Ecuador. It covers an area of 173 km² with maximum altitude 550 m, at the summit of Cerro Pajas (Fig. 2). The climate of the island is characterised by two seasons during the year: the warm rainy season (January–June; Fig. 3) and the cool dry, known as the *garúa* season (July–December; Fig. 2).

The landscape of Floreana is dominated by several hills (Fig. 2 y 3), whose habitats harbour a great diversity of flora and fauna, which have hardly been studied. The island has several tourist visitor sites, and historically, Floreana has been much visited by tourists, naturalists, scientists and others. Unfortunately, it is the Galapagos island most affected by the presence of introduced organisms, such as goats and donkeys (now eradicated), which caused dramatic changes in the structure and composition of the native vegetation. Floreana was the unique habitat of *Sicyos villosa* y *Delilia inelegans*, two endemic plant species now extinct, collected only by Charles Darwin during his visit to the island in September 1835. Neither species has been found again since. The causes of their disappearance are uncertain, but the first human settlement was established on the island in 1832, three years before Darwin's historic visit.

In 2007–08, surveys from the Coastal Zone to selected highland areas (Fig. 1) were carried out to evaluate the population status of the threatened endemic flora of Floreana. The present guide forms part of the results of this study, as a contribution to our knowledge of the vegetation. It includes 54 of the 204 native and endemic plant species known from the island.

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1 *Sesuvium edmonstonei*
AIZOACEAE



2 *Sesuvium edmonstonei*
AIZOACEAE



3 *Alternanthera filifolia*
AMARANTHACEAE



4 *Alternanthera filifolia*
AMARANTHACEAE



5 *Alternanthera galapagensis*
AMARANTHACEAE



6 *Alternanthera galapagensis*
AMARANTHACEAE



7 *Alternanthera nesiotis*
AMARANTHACEAE



8 *Alternanthera nesiotis*
AMARANTHACEAE



9 *Alternanthera nesiotis*
AMARANTHACEAE



10 *Lithophila radicata*
AMARANTHACEAE



11 *Lithophila radicata*
AMARANTHACEAE



12 *Lithophila subscaposa*
AMARANTHACEAE



13 *Lithophila subscaposa*
AMARANTHACEAE



14 *Lithophila subscaposa*
AMARANTHACEAE



15 *Acanthospermum microcarpum*
ASTERACEAE



16 *Acanthospermum microcarpum*
ASTERACEAE



17 *Acanthospermum microcarpum*
ASTERACEAE



18 *Baccharis steetzii*
ASTERACEAE



19 *Baccharis steetzii*
ASTERACEAE



20 *Chrysanthellum pusillum*
ASTERACEAE

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21 *Chrysanthellum pusillum*
ASTERACEAE



22 *Darwiniothamnus tenuifolius*
ASTERACEAE



23 *Delilia inelegans**
ASTERACEAE



24 *Eclipta alba*
ASTERACEAE



25 *Lecocarpus pinnatifidus*
ASTERACEAE



26 *Lecocarpus pinnatifidus*
ASTERACEAE



27 *Scalesia affinis*
ASTERACEAE



28 *Scalesia affinis*
ASTERACEAE



29 *Scalesia pedunculata*
ASTERACEAE



30 *Scalesia pedunculata*
ASTERACEAE



31 *Scalesia villosa*
ASTERACEAE



32 *Trigonopterum laricifolium*
ASTERACEAE



33 *Tournefortia rufo-sericea*
BORAGINACEAE



34 *Tournefortia rufo-sericea*
BORAGINACEAE



35 *Racinaea insularis*
BROMELIACEAE



36 *Opuntia megasperma* var. *megasperma*
CACTACEAE



37 *Opuntia megasperma* var. *megasperma*
CACTACEAE



38 *Maytenus octogona*
CELASTRACEAE



39 *Maytenus octogona*
CELASTRACEAE



40 *Cuscuta campestris*
CONVOLVULACEAE

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41 *Cuscuta campestris*
CONVOLVULACEAE



42 *Varronia revoluta*
CORDIACEAE



43 *Varronia scouleri*
CORDIACEAE



44 *Varronia scouleri*
CORDIACEAE



45 *Sicyos villosus**
CUCURBITACEAE



46 *Cyperus anderssonii*
CYPERACEAE



47 *Tiquilia fusca*
EHRETIACEAE



48 *Chamaesyce punctulata*
EUPHORBIACEAE



49 *Chamaesyce punctulata*
EUPHORBIACEAE



50 *Croton scouleri*
EUPHORBIACEAE



51 *Croton scouleri*
EUPHORBIACEAE



52 *Tephrosia cinerea*
FABACEAE



53 *Salvia pseudoserotina*
LAMIACEAE



54 *Salvia pseudoserotina*
LAMIACEAE



55 *Linum cratericola*
LINACEAE



56 *Linum cratericola*
LINACEAE



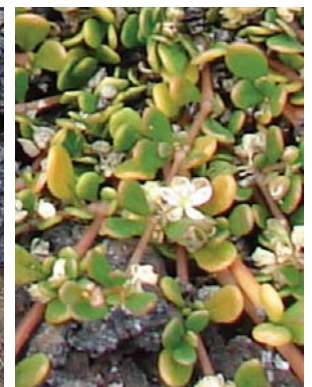
57 *Gossypium darwinii*
MALVACEAE



58 *Waltheria ovata*
MALVACEAE



59 *Mollugo flavescens* ssp. *insularis*
MOLLUGINACEAE



60 *Mollugo flavescens* ssp. *insularis*
MOLLUGINACEAE

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61 *Mollugo flavescens* spp. *gracillima*
MOLLUGINACEAE



62 *Mollugo flavescens* spp. *gracillima*
MOLLUGINACEAE



63 *Mollugo floriana* ssp. *floriana*
MOLLUGINACEAE



64 *Mollugo floriana* ssp. *floriana*
MOLLUGINACEAE



65 *Ionopsis utricularioides*
ORCHIDACEAE



66 *Ionopsis utricularioides*
ORCHIDACEAE



67 *Oxalis corniculata*
OXALIDACEAE



68 *Passiflora foetida*
PASSIFLORACEAE



69 *Passiflora foetida*
PASSIFLORACEAE



70 *Passiflora suberosa*
PASSIFLORACEAE



71 *Sporobolus virginicus*
POACEAE



72 *Sporobolus virginicus*
POACEAE



73 *Polygala galapageia*
POLYGALACEAE



74 *Polygala galapageia*
POLYGALACEAE



75 *Borreria dispersa*
RUBIACEAE



76 *Borreria* sp.
RUBIACEAE



77 *Borreria* sp.
RUBIACEAE



78 *Chiococca alba*
RUBIACEAE



79 *Chiococca alba*
RUBIACEAE



80 *Psychotria angustata*
RUBIACEAE

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81 *Psychotria angustata*
RUBIACEAE



82 *Psychotria rufipes*
RUBIACEAE



83 *Psychotria rufipes*
RUBIACEAE



84 *Phoradendron henslovii*
SANTALACEAE



85 *Cardiospermum corindum*
SAPINDACEAE



86 *Cardiospermum corindum*
SAPINDACEAE



87 *Dodonaea viscosa* var. *spatulata*
SAPINDACEAE



88 *Dodonaea viscosa* var. *spatulata*
SAPINDACEAE



89 *Lycium minimun*
SOLANACEAE



90 *Nolana galapagensis*
SOLANACEAE



91 *Nolana galapagensis*
SOLANACEAE



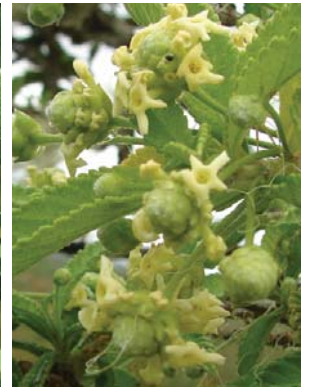
92 *Duranta dombeyana*
VERBENACEAE



93 *Duranta dombeyana*
VERBENACEAE



94 *Lippia salicifolia*
VERBENACEAE



95 *Lippia salicifolia*
VERBENACEAE



96 *Tribulus cistoides*
ZYGOPHYLLACEAE



97 *Tribulus cistoides*
ZYGOPHYLLACEAE



98 *Tribulus cistoides*
ZYGOPHYLLACEAE