

Notes to *Reichardia famarae* (Asteraceae) on Fuerteventura

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Reichardia famarae Bramwell & Kunkel ex Gallego & Talavera is an endemic species of the eastern Canary Islands growing only on Lanzarote and Fuerteventura (HANSEN & SUNDING 1993, ACEBES GINOVÉS et al. 2001). The „Lista Roja“ (2000) classified *Reichardia famarae* as vulnerable (VU) with restricted area of distribution respectively less than 5 localities (code D 2).



Fig. 1: *Reichardia famarae* near La Pared (22.2.2005).

On Lanzarote the species occurs only in the Famara cliffs (Riscos de Famara) according to BRAMWELL & BRAMWELL 1990, REYES-BETANCORT, WILDPRET DE LA TORRE & LEÓN-ARENCIBIA 2001). On Fuerteventura our species is restricted to the peninsula Jandía (KUNKEL 1977, BRAMWELL & BRAMWELL 1990).

REYES-BETANCORT et al. (2001) described the *Reichardia famarae*-*Helichrysetum gossypini* growing on vertical rock faces exposed to the north. Character species of this chasmophytic association are *Reichardia famara* and *Helichrysum gossypinum* (endemic to Lanzarote). The association belongs to the class Greenovio-Aeonietea, and is endemic to the cliffs of Famara (Lanzarote).

Till now there is little known about the association of *Reichardia famarae* on Fuerteventura. RODRIGUEZ DELGADO et al. (2000: Tab. 9, Nr. 8) listed our species as companion in the *Micromerio rupestris-Oleetum cerasiformis* (*Kleinio-Euphorbietum canariensis*) from the Pico del Fraile (Jandía).

We studied the scattered populations in the west and north of La Pared growing on cliffs and steep slopes exposed to the northwest (tab. 1). There exist evidences for a certain accumulation at the slopes of gullies, whose bottoms sometimes are covered by thin layers of organogenic sand. We also found *Reichardia famarae* on side cuttings along roads. Both observations are showing that our species is able to colonize suitable new habitats. The vegetation cover hardly exceeds 15 %, the individuals of *Reichardia famarae* are growing scattered together with species of different classes:

Pegano-Salsoletea: *Launaea arborescens*, *Salsola vermiculata*, *Chenoleoides tomentosa*, *Frankenia capitata*,

Polycarpaeo-Traganetea: *Zygophyllum fontanesii*, *Polycarpea nivea*, *Lotus lanceottensis*,

Stellarietea mediae: *Mesembryanthemum nodiflorum*, *Lotus glinoides*, *Chenopodium murale* etc.

The stands with *Reichardia famarae* studied by us are pioneer communities at steep and wind-swept slopes in the influence of the salt-spray. The biomass is low due to soil erosion, water-shortage and strong winds. The species combinations don't allow the definitive phytosociological classification. From the ecological point of view we find connections to the *Frankenio capitati-Zygophylletum fontanesii* und the *Chenoleo tomentosae-Suedetum mollis*.

Tab. 1: *Reichardia famarae* stands on Fuerteventura.

Number of the relevé	1772	1744	1745	1771	1743	1773	2057	2058	2059	2060	Freq.
Area [m ²]	40	30	80	15	30	20	20	10	10	10	
Exposition	W	W	N	NE	.	.	NW	W	W	NW	
Inclination [°]	35	35	30	.	.	.	20	40	40	25	
Vegetation cover [%]	10	10	10	5	10	5	5	15	15	20	
Number of species	10	8	6	7	6	6	4	5	6	4	%
<i>Reichardia famarae</i>	2.2	2.1	2.2	1.1	2.1	2.1	1.1	1.2	2.2	+	100
<u>Pegano-Salsoletea:</u>											
<i>Launaea arborescens</i>	1.2	r	.	1.2	1.1	1.1	+	+	.	+	80
<i>Salsola vermiculata</i>	+	.	1.2	+°	.	.	.	2.2	1.2	+j	60
<i>Atriplex glauca ssp. ifniensis</i>	.	+2	1.2	.	1.1	.	.	.	.	.	30
<i>Frankenia capitata</i>	.	1.1	.	.	.	.	.	.	.	.	10
<i>Lycium intricatum</i>	.	.	2.3	.	.	.	.	.	.	.	10
<i>Chenoleoides tomentosa</i>	.	.	.	.	1.2	.	.	.	.	.	10
<i>Suaeda mollis</i>	.	.	.	.	.	.	.	1.2	.	.	10
<u>Polycarpaeo-Traganetea:</u>											
<i>Zygophyllum fontanesii</i>	+	+	1.2	1.1	.	+	1.1	+	1.1	.	80
<i>Polycarpea nivea</i>	+	1.1	.	+	+2	.	.	.	+	.	50
<i>Lotus lancerottensis</i>	.	+	.	1.1	.	.	.	.	.	.	20
<u>Stellarietea mediae:</u>											
<i>Mesembryanthemum nodiflorum</i>	1.2	+	+2	+2	.	1.2	.	.	+2	.	60
<i>Lotus glinoides</i>	1.2	.	.	.	.	+	+2	.	+	2.3	50
<i>Chenopodium murale</i>	1.2	.	.	.	.	.	.	.	.	.	10
<i>Patellifolia patellaris</i>	1.2	.	.	.	.	.	.	.	.	.	10
<i>Ononis serrata</i>	+2	.	.	.	.	.	.	.	.	.	10
<i>Mesembryanthemum crystallinum</i>	.	.	.	.	.	+2	.	.	.	.	10
<i>Kickxia heterophylla</i>	.	.	.	.	1.2	.	.	.	.	.	10

Gullies and cliffs in the surroundings of La Pared, 20.2.2003, 24.2.2003 and 22.2.2005.



Fig. 2: Typical habitat near the coast: gully with *Zygophyllum fontanesii*.



Fig. 3: Gully with a scattered sub-population of *Reichardia famarae* (small yellow spots).

The investigations on Lanzarote and Fuerteventura point out the vitality of *Reichardia famarae* which is able to fit into three completely different communities.



Fig. 4: *Reichardia famarae* at the bottom of a gully (20.2.2003).

Literature

ACEBES GINOVÉS, J. R., M. DEL ARCO AGUILAR, A. GARCÍA GALLO, M. C. LEÓN ARENCIBIA, P. L. PÉREZ DE PAZ, O. RODRIGUEZ DELGADO & W. WILDPRET DE LA TORRE (2001): División Spermatophyta. In: IZQUIERDO, I., J. L. MARTÍN, N. ZURITA & M. ARECHAULETA (eds.): Lista des especies silvestres de Canarias (hongos, plantas y animales terrestres). – La Laguna: Consejería de Política Territorial y Medio Ambiente Gobierno de Canarias, p. 100-140.

BRAMWELL, D. & Z. I. BRAMWELL (1990): Flores silvestres de las Islas Canarias. – Alcorcon. XIV, 376 S.

HANSEN, A. & P. SUNDING (1993): Flora of Macaronesia. Checklist of vascular plants. 4., rev. ed. – Sommerfeltia, 17: 1-283.

KUNKEL, G. (1977): Las plantas vasculares de Fuerteventura (Islas Canarias), con especial interés de las forrajeras. – Naturalia Hispanica, 8: 130 p.

Lista Roja de la flora vascular Española (2000). – Conservación Vegetal, 6: 39 S.

REYES-BETANCORT, J. A., W. WILDPRET DE LA TORRE & M. C. LEÓN ARENCIBIA (2001): The vegetation of Lanzarote (Canary Islands). – Phytocoenologia, 31: 185-247.

RIVAS-MARTÍNEZ, S., T. E. DÍAZ, F. FERNÁNDEZ-GONZALEZ, J. IZCO, J. LOIDI, M. LOUSÃ & A. PENAS (2002): Vascular plant communities of Spain and Portugal. Addenda to the syntaxonomical checklist of 2001. – *Itinera Geobotanica*, 15: 5-922.

RODRÍGUEZ DELGADO, O., A. GARCÍA GALLO & J. A. REYES BETANCORT (2000): Estudio fitosociológico de la vegetación actual de Fuerteventura (islas Canarias). - *Vieraea*, 28: 61-98.

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