

Ecological note on *Sonchus bourgeaui* on Fuerteventura

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Sonchus bourgeaui Sch.Bip. is a little known species of the subgenus *Sonchus*. It is mentioned in the recent floras of the Canary Islands for Fuerteventura, Lanzarote and Gran Canaria (KUNKEL 1977, HOHENESTER & WELß 1993, SCHÖNFELDER & SCHÖNFELDER 1997, ACEBES GINOVÉS ET AL. 2001). The species has two varieties: *var. bourgeaui* (Fuerteventura, Lanzarote, Gran Canaria?, and Morocco), and the endemic *var. imbricatus* (Svent.) Boulos (Gran Canaria and Lanzarote).



Fig. 1: *Sonchus bourgeaui* (old road from Lajares to El Roque (Fuerteventura, Feb. 2005).

Sonchus bourgeaui var. *bourgeaui* is one of the few annual species of the genus *Sonchus* on the Canary Islands. It is related to *Sonchus oleraceus*, *Sonchus tenerrimus*, and *Sonchus microcephalus*. *Sonchus bourgeaui* var. *bourgeaui* is distinguished by its larger flower heads, their deep yellow colour and the dense lanate hairs below the capitula. The outer involucreal leaves of the flower heads are densely covered with glandular hairs.

Recent karyological studies have shown that the above mentioned species are characterized by dysploidy (MEJIAS & ANDRES 2004). Whilst the basic chromosome number is $n = 9$, the chromosome numbers of *Sonchus bourgeaui* and *Sonchus tenerrimus* are $n = 8$ resp. $n = 9$.



Fig. 2: *Sonchus bourgeaui* with *Chrysanthemum coronarium* var. *discolor*, *Reichardia tingitana* and *Patellifolia patellaris* (roadside e. Lajares, 24.2.2005).

Sonchus bourgeaui is locally common on roadsides in the vicinity of Lajares and also of Vega de Río Palmas. It dominates the vegetation in small loamy depressions accompanying the roads (tab. 1). Most stands belong to the *Chenopodium muralis*-*Malvetum parviflorae*, as indicated by *Patellifolia patellaris*, *Chenopodium murale*, and *Malva parviflora*. There are transitions to other ruderal syntaxa like *Ilflogo spicatae*-*Stipetum capensis*, *Mesembryanthemetum crystallini* or *Hordeion leporini* (e.g. stands with *Chrysanthemum coronarium* and *Hordeum murinum* s.l.).

Tab. 1: Stands with dominating *Sonchus bourgeaui* on Fuerteventura.

Number of the relevé	2115	2116	2117	2119	2119	2120	2121	2122	2145	2146	2147	2148	
Area [m ²]	20	10	15	10	25	5	30	15	10	8	4	20	
Vegetation cover [%]	95	80	60	80	98	95	80	95	95	100	15	95	
Species number	12	10	8	10	13	9	11	14	14	10	10	12	%
<i>Sonchus bourgeaui</i>	3.2	4.3	2.2	4.3	3.3	4.3	3.3	4.4	3.3	3.3	4.4	4.4	100
<i>Stipa capensis</i>	3.4	.	1.2	3.3	2.3	2.3	2.3	1.2	.	.	.	.	58
<i>Asphodelus fistulosus</i>	+2	.	.	2.2	3.3	.	2.2	.	.	.	.	.	33
<i>Erodium chium</i>	.	.	.	.	.	.	.	.	1.1	4.3	+	1.1	33
<i>Volutaria cf. lippii</i>	.	.	.	.	.	.	.	.	1.1	.	+	1.1	25
<i>Avena barbata</i>	.	.	.	.	.	.	.	.	1.2	1.2	.	+	25
<i>Patellifolia patellaris</i>	1.1	1.1	2.2	+	3.3	1.2	1.1	.	3.3	2.2	.	1.2	83
<i>Chrysanthemum coronarium</i>	2.2	1.2	1.1	+	2.2	.	+	.	2.2	.	.	1.2	67
<i>Emex spinosa</i>	+	1.1	.	+	+	1.1	+	.	.	.	.	.	50
<i>Chenopodium murale</i>	2.2	+2	1.2	2.3	.	.	.	.	.	.	1.2	.	42
<i>Malva parviflora</i>	2.2	+°	.	.	1.2	.	.	.	+	.	.	.	33
<i>Sinapis alba</i>	1.2	.	+	.	.	.	2.3	.	.	.	.	.	25
<i>Mesembryanthemum nodiflorum</i>	.	1.2	1.2	.	.	+2	.	.	.	.	+2	.	33
<i>Sisymbrium erysimoides</i>	.	.	.	.	+2	1.2	1.2	.	.	.	.	.	25
<i>Echium bonnetii</i>	+	.	.	.	.	.	.	2.2	.	.	+	1.2	33
<i>Hordeum murinum s.l.</i>	.	.	.	2.2	.	.	.	1.2	2.2	2.2	1.2	.	42
<i>Mesembryanthemum crystallinum</i>	.	+2	.	.	.	.	.	.	.	.	2.2	2.2	25
<i>Carrichtera annua</i>	.	.	.	.	2.2	.	.	.	.	.	.	+	17
<i>Calendula aegyptiaca</i>	.	.	.	.	+2	.	.	.	+	.	.	.	17
<i>Avena sterilis</i>	.	.	.	.	.	.	.	1.2	.	.	.	.	8
<i>Rumex vesicarius</i>	.	.	.	.	.	.	.	.	+	+	1.2	.	25
<i>Sonchus oleraceus</i>	.	.	.	.	.	.	.	+2	.	.	.	.	8
<i>Bromus madritensis/rubens</i>	.	.	.	.	.	.	.	1.2	.	.	.	.	8
<i>Anagallis arvensis</i>	.	.	.	.	.	.	.	+2	.	.	.	.	8
<i>Urospermum picroides</i>	.	.	.	.	.	.	.	.	+	.	+	.	17
<i>Spergularia fallax</i>	.	.	.	.	.	.	.	.	.	+	.	.	8
<i>Hirschfeldia incana</i>	.	.	.	.	.	.	.	.	1.1	.	.	.	8
<i>Reseda lanceolata</i>	.	.	.	.	.	.	.	.	.	1.2	.	.	8
<i>Lavatera cretica</i>	.	.	.	.	.	.	.	.	.	1.1	.	.	8
<i>Bromus rigidus</i>	.	.	.	.	.	.	.	.	.	2.3	.	.	8
<i>Erucastrum canariense</i>	.	.	.	.	.	.	.	.	.	.	1.2	1.2	17
<i>Fumaria spec.</i>	.	.	.	.	.	.	.	.	.	.	+	+2	17
<u>Further herbaceous species:</u>													
<i>Phalaris minor</i>	+2	.	.	+2	+	+	.	1.2	.	.	.	.	42
<i>Reichardia tingitana</i>	.	.	2.2	.	.	+2	2.3	2.2	1.2	.	.	.	42
<i>Cuscuta planiflora</i>	.	.	.	.	1.2	.	.	.	.	.	.	.	8
<i>Cenchrus ciliaris</i>	.	.	.	.	1.2	.	.	.	.	.	.	.	8
<i>Scilla latifolia</i>	.	.	.	.	.	.	3.3	.	.	.	.	.	8
<u>Shrubby species of Pegano-Salsoitea:</u>													
<i>Salsola vermiculata</i>	1.1	1.1	.	2.1	.	2.2	1.1	1.2	.	.	.	.	50
<i>Launaea arborescens</i>	.	1.1	.	.	.	.	.	.	.	.	.	.	8
<i>Bassia tomentosa</i>	.	.	.	.	.	.	.	1.1	.	.	.	.	8
<i>Fagonia cretica</i>	.	.	.	.	.	.	.	.	+	.	.	1.2	17

No. 2115-2122: roadsides between Lajares and El Roque; No. 2145-4148: roadsides and slopes near Vega de Río Palmas (february 2005).

The situation on Lanzarote is similar, but not the same: *Sonchus bourgeaui* is a character species of the Bromo-Hirschfeldietum incanae (Hordeion leporini) according to REYES-BETANCORT, WILDPRET DE LA TORRE & LEÓN ARENCIBIA (2001). *Sonchus bourgeaui* was found also growing in other types of annual ruderal vegetation and also in dwarf herbage:

Hordeion leporini:
Euphorbio terracinae-Anacycletum coronati (frequency class I),

Chenopodion muralis:
Chenopodio muralis-Malvetum parviflorae (frequency class II)

Carrichtero-Amberboion lipii:
Ifloga spicatae-Stipetum capensis (frequency class II)

Helianthemetea guttati:
Hypochoeridi glabrae-Tuberarietum guttatae (frequency class I)

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