Table S1 - Sampled populations included in the analyzed dataset with details on sampling sites and field recorded host plants.

| **Samples ID** | **Samples collection details** | **Scored host plant** |
| --- | --- | --- |
| TB01 | Australia, New South Wales, Canberra, Dog Trap Road35°04'12.04"S, 148°59'0.82"E2008-2009, J. Lester leg. | *Onopordum* sp. |
| TB02 | Spain, Castilla y Leòn, Burgos, Aranda de Duero, Pardilla41°32'05.60''N, 03°42'52.70''W905 m12-13.iii.2009, A. Paolini & F. Lecce leg. | *Onopordum acanthium* |
| TB03 | Spain, Castilla y Leòn, Burgos, Aranda de Duero, Castrillo de la Vega41°39'42.00''N, 03°48'24.00''W801 m13-14.iii.2009, A. Paolini & F. Lecce leg. | *Onopordum acanthium* |
| TB04 | Spain, Castilla y Leòn, Burgos, Aranda de Duero Castrillo de la Vega41°39'44.00''N, 03°47'51.00''W13.iii.2009, A. Paolini & F. Lecce leg. | Unknown |
| TB05 | Spain, Castilla y Leòn, Burgos, "Aranda de Duero, Langa de Duero41°36'43.00''N, 03°23'57.00''W13-15.iii.2009, A. Paolini & F. Lecce leg. | *Onopordum* sp. |
| TB06 | Spain, Castilla y Leòn, Burgos, Aranda de Duero, Castrillo de la Vega41°39'44.00''N, 03°47'51.00''Wii-vi.2009, A. Paolini & M. Cristofaro leg. | *Onopordum* sp. |
| TB09 | Spain, Castilla y Leòn, Burgos, Aranda de Duero Pardilla41°32'05.60''N, 03°42'52.70''W905 mxi.2009, F. Lecce & F. Di Cristina leg.ii.2010, A. Paolini & M. Cristofaro leg. | *Onopordum acanthium* |
| TB10 | Spain, Castilla y Leòn, Burgos, Aranda de Duero Langa de Duero41°36'11.40''N, 03°23'05.00''W840 mxi.2009, F. Lecce & F. Di Cristina leg. | *Onopordum* sp. |
| TB11 | Spain, Castilla y Leòn, Burgos, Aranda de Duero Castrillo de la Vega41°39'42.00''N, 03°48'24.00''W801 mxi.2009, F. Lecce & F. Di Cristina leg. | *Onopordum acanthium* |
| TB14 | Spain, Castilla y Leòn, Soria prov., neigh. of Agreda41°50'46.82” N, 1°54'45.59” W984 m03.vii.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* cf. *acanthium* |
| TB15 | Spain, Castilla y Leòn, Soria prov., about 2 Km before Cueva de Agreda41°45'21.33” N, 1°54'20.74” W1211 m03.vii.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* cf. *nervosum* |
| TB16 | Spain, Castilla y Leòn, Soria prov., about 0.5 Km after Cueva de Agreda41°45'37.93”N, 1°52'59.12”W1318 m03.VII.2011, A. De Biase & E. Colonnelli leg. | Unknown |
| TB17 | Spain, Castilla y Leòn, Soria prov., plateau about 5 Km before Beratón, edge of oak forest"41°44'15.81”N, 1°51'31.83”W1287 m03.vii.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* cf. *macracanthum* |
| TB18 | Spain, Castilla y Leòn, Soria prov., plateau about 5 Km before Beratón, edge of oak forest41°44'15.81”N, 1°51'31.83”W1287 m03.VII.2011, A. De Biase & E. Colonnelli leg. | Unknown |
| TB19 | Spain, Aragòn, Teruel prov., about 2.3 Km before Buena (SE of Monreal del Campo), P.to de Argente40°42'34.16”N, 1°14'40.22”W1336 m4.vii.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TB20 A | Spain, Aragòn, Teruel prov., about 2.4 Km NE of Pozondon, Castello de Ares40°35'0.02”N, 1°27'20.88”W1344 m4.VII.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TB20 B | Spain, Aragòn, Teruel prov., about 2.4 Km NE of Pozondon, Castello de Ares40°35'0.02”N, 1°27'20.88”W1344 m4.VII.2011, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TB21 | Spain, Castile- La Mancha, Guadalajara prov., Alustante, Molino de Arriba40°36'51.48"N, 1°40'4.49"W1406 m4.VII.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TB22 | Spain, Castile- La Mancha, Guadalajara prov., Traid at TV repeater40°39'52.56"N, 1°48'38.22"W12564.VII.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TB24 | Spain, Aragòn, Teruel prov., neigh. of Alcalá de la Selva40°22'22.94"N, 0°42'19.645"W1107 m5.VII.2011, A. De Biase & E. Colonnelli leg. | Unknown |
| TB25 | Spain, Aragòn, Teruel prov., neigh. of Alcalá de la Selva40°22'22.94"N, 0°42'19.645"W1107 m5.VII.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TB26 | Spain, Aragòn, Teruel prov., 1.5 Km NW of Valdecebro (neigh. of Teruel)40°21'57.93"N, 1°3'35.01"W1489 m5.VII.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TB27 | Spain, Castilla y Leòn, Soria prov., Gormaz, Castillo de Gormaz41°30'43.40"N, 3°0'27.23"W27.v.2011 | *Onopordum* sp. |
| TB40 | Spain, Aragòn, Teruel prov., nearly 3 Km SW of La Puebla de Valverde40°12'34.27”N, 0°57'51.11”W1256 m05.vii.2011, A. De Biase & E. Colonnelli leg. | *Onopordum* sp. |
| TH01 | USA, Oregon, Douglas County, Dixonville30.v.2008, E. Coombs leg. | *Carduus picnocephalus* |
| TH02 | USA, Oregon, Douglas County, Dixonville30.v.2008, E. Coombs leg. | *Carduus picnocephalus* |
| TH03 | Canada, British Columbia, Thompson-Nicola district, Kamloops50°42'40.26"N, 120°26'16.56"W19.vi.08, Marsha De Wolf leg. | *Carduus nutans* |
| TH04 | Italy, Lazio, Roma, Martignano19.xii.2008 | *Carduus nutans* |
| TH05 | Italy, Lazio, Roma, Velletri, Prati del Vivaro41°40’60.00”N, 12°46’60.00”E12.ii.2009; 8.v.2009 | *Carduus nutans* |
| TH07 | New Zeland, South Island,North Canterbury, Culverden42°47'02.00”S, 172°55'6.00”E21.v.2007, R. Groenteman leg. | *Carduus nutans* |
| TH13 | Italy, Campania (SA), Cilento, Croce di Pruno13.vi.2009 | *Carduus picnocephalus* |
| TH15 | Italy, Lazio, Roma, Martignano42°4'60.00''N, 12°16'0.00''E04.xi.2010, A Paolini & F. Lecce leg. | *Carduus nutans* |
| TH20 | USA, Colorado, Boulder County, Boulder04.xii.2009 | *Carduus nutans* |
| TH24 | Germany, Steinberg near Wesseln (Hildesheim)26.vi.2011, P. Sprick leg. | *Carduus nutans* |
| TH25 | Spain, Castilla y Leòn, Soria prov., neigh. of Agreda41°50'46.82”N, 1°54'45.59”W984 m03.vii.2011, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH26A | Spain, Castilla y Leòn, Soria prov., about 2 Km before Cueva de Agreda41°45'21.33”N, 1°54'20.73”W1211 m03.vii.2011, A. De Biase & E. Colonnelli leg. | Unknown |
| TH26B | Spain, Castilla y Leòn, Soria prov., about 2 Km before Cueva de Agreda 41°45'29.36”N, 1°54'37.25”W1253 m06.vii.2011, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH27 | Spain, Aragòn, Teruel prov., nearly 8 Km SW of La Puebla de Valverde40°11'35.53”N, 1°0'45.22”W1475 m05.vii.2011, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH28 | Spain Aragòn, Teruel prov., about 4 Km E of Camarena de la Sierra40°8'50.57”N, 0°59'39.76”W1646 m05.vii.2011, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH29 | Spain, Castilla y Leòn, Soria prov., about 15 Km NW of Beratón, edge of oak forest41°43'46.01”N, 1°49'5.42”W1489 m06.vii.2011, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH31 | France, Perpignan, between Saint Laurent and Le Barcarès42°47'14.00”N, 3°00'13.00”E1 m20.v.2012, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH32 | France, Perpignan, between Saint Laurent e Le Barcarès42°47'14.00”N, 3°00'13.00”E1 m20.v.2012, A. De Biase & E. Colonnelli leg. | *Cirsium* sp. |
| TH33 | France, Perpignan, between Saint Laurent and Le Barcarès42°47'14.00”N, 3°00'13.00”E1 m20.V.2012, A. De Biase & E. Colonnelli leg. | *Silybum marianum**Carduus* sp. |
| TH34 | France, near St. Paul di Valmalle43°37'27.00”N, 3°39'03.00”E; 140 m43°37'28.00”N, 3°39'29.00”E; 145 m22.v.2012, A. De Biase & E. Colonnelli leg. | *Carduus* sp. |
| TH35 | France, Marsiglia, near Calissanne43°33'37.00”N, 5°08'44.00”E127 m23.v.2012, A. De Biase & E. Colonnelli leg. | *Cirsium* sp. |
| TH36 | France, Marsiglia, near Calissanne43°33'37.00”N, 5°08'44.00”E127 m23.v.2012, A. De Biase & E. Colonnelli leg. | *Silybum marianum* |
| TH37 | Georgia, near Akhaltsikhe41°38'24.00”N, 42°57'43.00”E985 m4.vi.2012, A. De Biase leg. | *Cirsium* sp. |
| TH38 | Italia, Abruzzo (AQ), Gran Sasso42°30'37.84"N, 13°24'36.90"EE. Colonnelli leg. | *Cirsium* sp. |
| TH39 | New Zealand, South Island, Central OtagoWaipiata, Tregonning Road45°11'51.97"S, 170°8'45.38"E21.ix.2012, R. Groenteman leg. | *Onopordum acanthium* |
| TH40 | New Zealand, South Island, Central OtagoWaipiata, Gimmerburn-Waipiata Rd.45°10'54.99"S, 170°8'7.18"E21.ix.2012, R. Groenteman leg. | *Cirsium vulgare* |
| TH41 | New Zealand, South Island, Central Otago,Waipiata, Gimmerburn-Waipiata Rd.45°10'54.99"S, 170°8'7.18"E21.ix.2012, R. Groenteman leg. | *Carduus nutans* |
| TH50 | Turkey, Kayseri province, neigh. of Kavak, 12 Km NW of Yesilhisar38°24'24.88"N, 34°58'15.55"E1571 m26.vi.2013, A. De Biase & E. Colonnelli leg. | *Carduus* cf. *nutans* |
| TH53 | Portugal, Serra de Estrela, Penhas de Saúde40°18'29.00"N, 7°32'56.00"W1580 m17.vi.2013, E. Colonnelli leg. | Unknown |
| TM01 | Australia, New South Wales, Canberra, Boboyan Rd.35°56'58.45"S, 148°59'0.82"E2008-2009, J. Lester leg. | *Carduus nutans* |
| TM02 | USA, Oregon, Douglas County, Dixonville30.v.2008 | *Carduus picnocephalus* |
| TT01 | Portugal, Viana do Castelo, Vila Praia de Âncora41°49'14.77"N, 8°51'10.14"W18 m20.vi.2013, E. Colonnelli leg. | *Plantago* sp. |