BBS-SEB International Bryological Meeting
2017
Western Andalusia
30 May - 6 June 2017

Beatriz Vigalondo and Francisco Lara report on
this year’s international meeting in Western Andalusia

A special bryological meeting, joining for
the first time the British (BBS) and the
Spanish (SEB) Bryological Societies,
took place last spring 2016 in Spain, in Western
Andalusia, with a very international atmosphere
due to the assistance of 30 bryologists from
eight different countries (United Kingdom,
Spain, Germany, Portugal, France, Netherlands,
Switzerland and Hungary). The initial
participants were Tom Blockeel, Juan Antonio
Calleja, Isabel Draper, Peter Erzberger, Maren
Flagmeier, Ricardo Garilleti, Nuria Jiménez,
Thomas Kiebacher, Liz Kungu, Francisco Lara,
María Leo, David Long, Michael Lüth, Peter
Martin, Vicente Mazimpaka, Nagore G. Medina,
Angela Medina, Jurgen Nieuwkoop, Ron Porley,
Antonio Román Muñoz, Gordon Roithero,
Emeric Sulmont, and Beatriz Vigalondo. The
last days of the meeting a few more members
of the SEB joined us: Javier M. Abaigar, Belén
Albertos, Carlos Cereijo, Jennifer Cogolludo,
Jesús Muñoz, Víctor Pineda, and Susana Rams.

The base of the meeting was located close
to Ronda, in “La Algaba”, a nice rustic villa
surrounded by Mediterranean cork oak and holm
oak forest, where most of the attendants stayed.
From there we could visit during the 8 days of
the meeting several interesting natural places
of Western Andalusia like Los Alcornocales Natural
Park (Ojén and El Aljibe), Tórcal de Antequera,
Desfiladero de los Gaitanes (Fig. 1), Sierra de las
Nieves National Park, Sierra Bermeja Natural
Place and Grazalema National Park. These
areas were very attractive from a bryological
perspective due to the diversity of habitats and
the rich and singular flora they hold. Some of
these areas are well known from a bryological
point of view, but others were poorly studied,
so our visit was very productive and interesting,
accompanied by a week of sunny spring days.
Cork oak and Spanish fir forests besides alder
and common rhododendron riparian galleries
were the most prospected habitats, although we
also collected in woods and thickets dominated
by Quercus canariensis, Q. faginea, Q. ilex subsp.
ballota, Pinus pinea, and Pistacia terebinthus,
etc., with a total of 15 prospected localities.

May 30 - “La Algaba” cork oak forest
The first day, after the welcoming in La Algaba,
Francisco Lara, Nagore García, Antonio Román,
Juancho Calleja and Ricardo Garilleti gave some
introductory talks about bryological and general
biological aspects of the areas we were going
to visit the next days and the planning of the
meeting. After these presentations, we took a
first walk until sunset around the forest of La
Algaba, where the most interesting findings were
Orthotrichum philibertii, Zygodon catarinensis and
Codonoblepharon forsteri (Fig. 2).

May 31 - Los Alcornocales Natural Park
A long bumping road trip led us to the
southernmost part of Los Alcornocales N.P. The
first stop was at Sierra de Ojén, in a windy area
with great views of the Strait of Gibraltar, where
we prospected an open cork oak forest with
dispersed and twisted trees (Fig. 3). Shortly
after we continued into the reserve, heading to “Los
Llanos del Juncal” area with the guidance of two
of the N.P. rangers. In this locality grows a well
preserved Mediterranean cloud forest dominated
by subtropical laurid shrubs and trees such as
Rhododendron ponticum, Laurus nobilis and Ilex
aquifolium accompanied by Quercus canariensis.
The continuous influence of wet ocean winds
produces low clouds and frequent mist on these
coastal mountains which allows the development
of a short of Mediterranean laurel forest. Here,
the epiphytic environment was especially good
for cryptogams (Fig. 4), as well as streams and
open temporary swampy areas. The local endemic
moss Exsertotheca haustica (= Neckerha haustica)
is quite common there (Fig. 5), and we collected
many other hygrophytes, most of them very rare.

Fig. 1. Collecting in the rock walls along the walkway of El Caminito del Rey, in Los Gaitanes Gorge. B. Vigalondo.

Fig. 2. top left clockwise. Codonoblepharon forsteri. Several populations of this rare moss were found during the
meeting. M. Lüth. △Fig. 3. Surveying a branch of
Quercus suber at Sierra de Ojén. B. Vigalondo. △Fig. 4. Luscious epiphytic layer in a Quercus canariensis forest
at Los Llanos del Juncal (Los Alcornocales Natural Park near Tarifa). Neckeraeae dominate these communities,
where the fern Davallia canariensis also grows. F. Lara
we visited two places with particular geological formations where the rock walls were the stars of the day. First, we could enjoy "a walk along the heights" through the "Caminito del Rey" in the impressive gorge of Los Gaitanes (Fig. 9). Along the wooden walkway that hung from the rock walls of the gorge there was little to note because of the xeric conditions. However, we collected Plagiochasma rupestre, Grimmia tergestina, Timmiella barbuloides, and Leptobarbula berica among other calciphilous bryophytes. We also prospected other xeric habitats in the surroundings of the gorge (Fig. 10).

In the afternoon we moved to the "Torcal de Antequera" (Fig. 11), a rocky labyrinth where fortunately nobody got lost and we made a few interesting bryological findings, among them Neckera menziesii, Orthotrichum bistratsum, and especially Syntrichia handelii. The vegetation of this rugged karst landscape was a scrubland dominated by Crataegus monogyna, Quercus rotundifolia, and Acer monspeliensis, whose branches and twigs were full of epiphytic mosses with Antitrichia californica, Leucodon sciuroides, Pulvigera lyellii (Orthotrichum lyellii), and Lewinskya acuminata (Orthotrichum acuminatum) as the prevailing species.

June 2–La Sauceda

The third day of fieldwork took us again on a road trip to Los Alcornocales N.P., this time to an area in its northern part, La Sauceda, where Quercus suber and Q. canariensis forests grow on the slopes of the highest mountain of the region (Fig. 12). There, we followed the in the Southern Iberian Peninsula, such as the liverworts Diplophyllum albicans, Cololejeunea minutissima, Marsupella emarginata, Lejeunea caseflata, Frullania teneriffae, Harpalyce aquatica, and the mosses Ulota calvescens (Fig. 6), Isotrechium holtii, and Hookeria lucens. Thanks to the rangers, we could visit a small population of the rare Macaronesian-Iberian fern Calciota macrocarpa and we found some interesting bryophytes such as the previously unrecorded Talarnea europaea.

In the afternoon, we visited a second site within the Natural Park, “La Montera del Torero” (Fig. 7), a particular geological sandstone formation cut by a riparian forest of Alnus glutinosa with Rhododendron ponticum and Nerium oleander. Here is found part of the only European population of the subtropical fern Polystichum nudum, which we saw growing in the rock walls' crevices. In a drier area close to the road we saw some specimens of the carnivorous plant Drosophyllum lusitanicum, endemic from the Iberian Peninsula and Morocco. Pallavicinia lyellii (Fig. 8), Pseudotaxiphyllum elegans, and Sematophyllum subtrunculosum were some of the interesting bryophytes located here.

June 1–Desfiladero de los Gaitanes and Torcal de Antequera.

This was the "rocky day" of the meeting since we visited two places with particular geological formations where the rock walls were the stars of the day. First, we could enjoy “a walk along the heights” through the “Caminito del Rey” in the impressive gorge of Los Gaitanes (Fig. 9). Along the wooden walkway that hung from the rock walls of the gorge there was little to note because of the xeric conditions. However, we collected Plagiochasma rupestre, Grimmia tergestina, Timmiella barbuloides, and Leptobarbula berica among other calciphilous bryophytes. We also prospected other xeric habitats in the surroundings of the gorge (Fig. 10). In the afternoon we moved to the “Torcal de Antequera” (Fig. 11), a rocky labyrinth where fortunately nobody got lost and we made a few interesting bryological findings, among them Neckera menziesii, Orthotrichum bistratsum, and especially Syntrichia handelii. The vegetation of this rugged karst landscape was a scrubland dominated by Crataegus monogyna, Quercus rotundifolia and Acer monspeliensis, whose branches and twigs were full of epiphytic mosses with Antitrichia californica, Leucodon sciuroides, Pulvigera lyellii (Orthotrichum lyellii), and Lewinskya acuminata (Orthotrichum acuminatum) as the prevailing species.

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path to the Aljibe peak surveying the stream uphill to reach an interesting area of “Canuto” vegetation formations, dominated by natural and autochthonous Rhododendron ponticum that welcomed us at lunchtime with a beautiful pink blossom (Fig. 13). Along the way up, we could examine a good population of Asterella africana, a thallose liverwort not previously known from Southern Iberian Peninsula. Other remarkable species located were the hornworts Phymatoceros bulbiculosus and Phaeoceros laevis, the liverwort Corinina coriandrina (Fig. 14), and the mosses Dityrichia mucronata, Fabronia pusilla, Homalia lusitanica, Orthotrichum comosum, Scopiturum sendraei and Tortula freibergii.

After a quick stop in La Algaba to freshen up, we visited the nearby town of Ronda where we could enjoy a warm night in a terrace of center-town with dinner of some typical “tapas” from Andalusia accompanied by wines of the region. The day was again sunny and we could enjoy the amazing landscapes of this mountain range its characteristic garnet color and gives it its name, “Bermeja” (Fig. 20). Here, the trunks of Quercus alpestris were full of epiphytes, and in the most humid rocky areas, the mosses Orthotrichum bistratosum, Orthotrichum hispanicum, Orthotrichum scanicum, Schistidium cf. atrofuscum, Clevea capillare, Clevea capillaris, and the liverwort Syntrichia handelii, followed the steep path up to the top to enjoy a thallose liverwort not previously known from hundreds of years old, and its richness in Ibero-North African vascular plant endemism; these were already flowering for our enjoyment.

The day was again sunny and we could enjoy the amazing landscapes of this mountain range on the way up to the summit. The path began in a Pinus pinaster area, very interesting for epiphytes as the communities were dominated by Orthotrichaceae species like Lewinskyka breviseta (Fig. 16), L. tortisectia, L. acuminata, and Polysora hydrea. Then the path began to be steeper and Abies pinsapo progressively dominated the landscape (Fig. 17). There we collected species like Orthotrichum hispanicum, O. scanicum, Schistidium cf. arofascum, and Syntrichia hantelii (Fig. 18). After having lunch in the shadow of centenary old firs, a group followed the steep path up to the top to enjoy an unusual semideciduous open oak formation of Quercus ilex mixed with Juniperus sabina on the top of the southern slope (Fig. 19). Here, the trunks of Quercus trees were full of epiphytes, and in the most humid rocky areas

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June 3 – Sierra de las Nieves Natural Park

This day we left the sandstones of Los Alcornocales, and went to the limestone massif of Sierra de las Nieves N.P for the first survey of an Abies pinsapo forest, a fir species endemic from this area of the Iberian Peninsula and Northern Morocco. This particular Spanish fir forest on the northern slope of Sierra de las Nieves stands out for its old-growth specimens, some of them hundreds of years old, and its richness in Ibero-North African vascular plant endemism; these were already flowering for our enjoyment. This particular Spanish fir forest on the northern slope of Sierra de las Nieves stands out for its old-growth specimens, some of them hundreds of years old, and its richness in Ibero-North African vascular plant endemism; these were already flowering for our enjoyment.

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June 4 – Los Reales de Sierra Bermeja Natural Place

This journey took us to the Abies pinsapo forest of Sierra Bermeja massif, a very singular area in this region since it consists of an outcrop of peridotite, a rock of volcanic origin that gives this mountain range its characteristic garnet color and gives it its name, “Bermeja” (Fig. 20). Here we found some interesting bryophytes, notably Frullania fragilifolia, Grimmia meridionalis and Orthotrichum scanicum, besides an epiphytic moss, close to Lewinskyka reptaeza, that could correspond to a new species.

In the afternoon we returned to La Algaba to continue with the following scientific communications: Susana Rams - Current state of knowledge on the bryophyte flora of Málaga province (Spain). Nuria Jiménez - High tolerance of Ptychostomum capillare to copper contamination: effects on its
field through the shaded hillside first crosses and then along the top of the northern slope. Pinus, eastern slope of the sierra, through a mixed mountain range where we visited our third and last visit to Lifa Valley, back in Sierra de las Nieves.

June 5 - Sierra de Grazalema

A wonderful spring and sunny day was waiting for us in Sierra de Grazalema N.P., a limestone mountain range where we visited our third and last Abies pinsapo forest in Sierra del Pinar (Fig. 21). Here, we followed a path from the south-eastern slope of the sierra, through a mixed Pinus-Quercus forest that took us to the crest, and then along the top of the northern slope. The path through the shaded hillside first crosses Quercus ilex patches of vegetation and then heads into a dense and more humid Spanish fir forest. Along the way we enjoyed interesting bryophyte and vascular floras, and we could collect several interesting bryophytes: Clevea hyalina, Southbya nigrella, Frullania fragilisfolia, Buxbaumia aprica (=B. rosanroesiae), Syntrichia barnesii, Orthotrichum comosum, Lewinskya iberica (Fig. 22), and Isothecium algarricum. Additionally, fully fruiting specimens of a moss form related to Pulviera hyelii were collected for study.

During the evening, back in La Algaba, we attended to the last talks of the meeting: Thomas Kiebacher - Ignored crown jewels: The role of tree crowns in bryophyte and lichen species richness in Sycamore maple wooded meadow, Beatriz Vigalondo - Exploring genomes to find intraspecific variable markers for biogeographic and phylogeographic studies in Orthotrichoideae.

The good balance between experienced bryologists, researchers in training and students who were starting in field bryology was a positive factor that contributed to create a very special atmosphere throughout the meeting. At all times a friendly and collaborative environment was present and allowed to enjoy the places visited, the great variety of bryophytes found and the people gathered there. But not everything is bryology, and we could also enjoy good weather, great landscapes, good food, excellent wine and whisky, good music, and even nice early morning birdwatching walks around La Algaba forest for those early-birds under the guidance of Juancho Calleja.

We want to show our deepest gratitude to the managers of La Algaba for all the facilities offered to organize the meeting and for ensuring that the stay of all the attendants was so exceptional. Also to the Diputación Provincial de Málaga which facilitated the visit to the Caminito del Rey and to the Ministry of Environment and Spatial Planning of the Andalusian Government, and specifically to the Territorial Delegations of Cadiz and Malaga, which issued the necessary permits to collect in the protected natural places visited. It was a great meeting that both BBS and SEB would like to repeat in a near future.

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