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*Identity of Tortula baetica (Casas & Oliva) J. Guerra & Ros
with T. israelis Bizot & F. Bilewsky*

Tortula israelis was described by Bizot & Bilewsky (*cf.* Bilewsky & Nachmony, 1955) from sterile material collected in the hills of Judea and later reduced to a variety of *Tortula muralis* (Bizot, 1956). This taxon was characterized by the presence of very high cylindrical papillae, at least in the upper leaf cells. In Spain, *Tortula muralis* var. *baetica* was described by Casas & Oliva (1982). The original description of this taxon mentioned its similarity with *T. israelis* notably the presence of the same type of papillosity in the cells although, according to the authors, other characteristics did not coincide.

Guerra, Ros & Carrión (1992) compared *T. muralis* with *T. muralis* var. *obcordata* and *T. muralis* var. *baetica*. As a result they elevated var. *baetica* to the rank of species based on the type of papillosity (uncommon in *Tortula*), nerve anatomy, upper leaf cell size and sporoderm configuration.

For some time the common identity of *Tortula israelis* and *T. baetica* has been suspected by us. The same type of leaf papillosity has been described for both taxa except that the number of papillae per cell differs: one for *T. israelis* and one–two(–three) for *T. baetica*. In an attempt to clarify the identity of both taxa, material of *T. israelis* was requested from several herbaria. We were finally able to study the type material (topotype) belonging to the Bizot Herbarium in Paris (PC): Bet Jimal, collines de Judaea, Beffroi antique, appr. 450 m. III. 54. *Bilewsky*. We conclude that *T. israelis* and *T. baetica* are indeed the same taxon. Slight variations in the number of papillae per cell are of quite common occurrence in the *Pottiaceae* genera (e.g. *Crossidium davidai* Catcheside and *Crossidium aberrans* Holz. & Bartr.), as are disjunctions between species distributed through the Irano-Turanic and Mediterranean regions.

We therefore propose that *T. baetica* and *T. israelis* should be considered synonymous and elevated to the rank of species, based on the study carried out by Guerra *et al.* (1992). The name *T. israelis* takes priority:

Tortula israelis Bizot & F. Bilewsky, Bull. Res. Council Israel, sect. D, Botany: 51. 1955.

Tortula muralis Hedw. var. *israelis* (Bizot & F. Bilewsky) Bizot, Rev. Bryol. Lichénol. 25: 270. 1956.

Tortula muralis Hedw. var. *baetica* Casas & Oliva, Acta Bot. Malacitana 7: 104. 1982.

Tortula baetica (Casas & Oliva) J. Guerra & Ros, J. Bryol. 47: 281. 1992.

Thus, the distribution area of *T. israelis* is extended to the southern part of the Iberian Peninsula (Casas & Oliva, 1982; Guerra *et al.*, 1992; Fuertes *et al.*, 1994; Cano & García-Zamora, 1995). The previously known range includes Israel (Bilewsky & Nachmony, 1955), Cyprus (Bilewsky, 1965, Koppe, 1976) and Turkey (Henderson & Prentice, 1969) (Fig. 1).

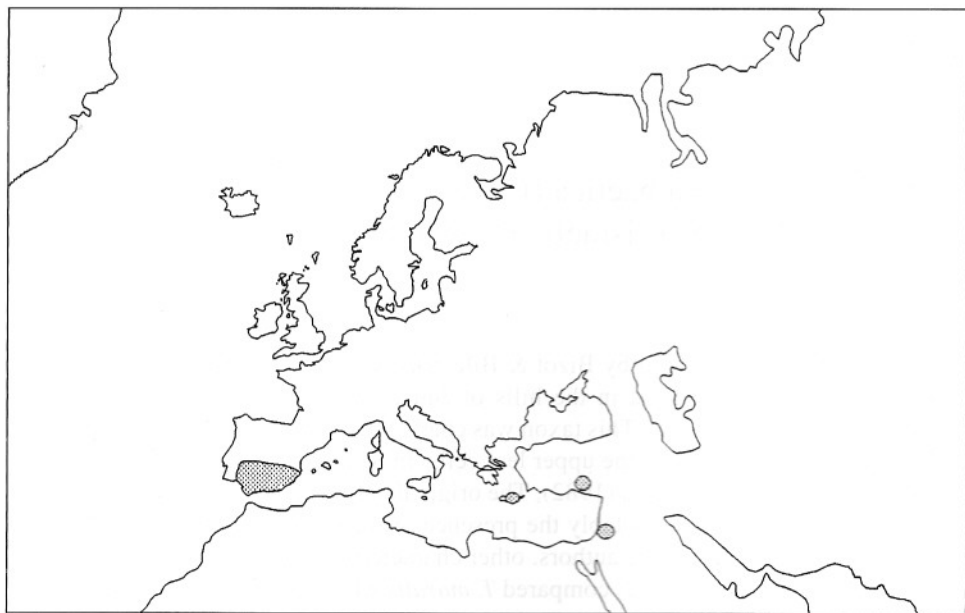


Figure 1. Distribution of *Tortula israelis*.

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Further observations on the bryophytes in Chawley Brick Pit, Oxford

Chawley Brick Pit, Berkshire, was first visited by E. W. Jones in 1948, and together with several other bryologists, he made detailed observations of the bryophytes over a number of years. This culminated in his paper 'Bryophytes in Chawley Brick Pit, Oxford, 1948–1985' (Jones, 1986). Chawley Brick Pit is also known as Hurst Hill SSSI, and it is in this connection that I visited the site on a number of occasions from 1994 to early 1995. It is very unusual to find a site with a history of meticulous bryological recording, and as such I was inspired to see if the plants that were once known from here still existed ten years on. Some of the species recorded in the past were quite remarkable, including (with dates last seen) *Lophozia capitata* (1951), *Buxbaumia aphylla* (1969), *Sphagnum riparium* (1962), *Ditrichum pusillum* (1968) and many others. Much of the scientific interest of the site is concerned with the successional changes that have occurred since the pit was abandoned in the late 1930s. Species have come and gone, a process that is still continuing today. Changes in the bryoflora within the SSSI over the last ten years are reported here.

Nomenclature follows Smith (1990) for liverworts and Corley *et al.* (1981) with amendments by Corley & Crundwell (1991) for mosses.

Table 1 lists additions to the bryophyte flora of the Pit in 1995 and the status of some of the more notable species that were recorded in 1985 or before. It is quite possible that a few of the species were overlooked in 1995. *Dicranella cerviculata* and *Gymnocolea inflata*, once locally abundant, were rare in 1985, and they were searched for unsuccessfully in 1995. In 1985 *Pleurozium schreberi* was thought to be only just persisting from former times when the site was relatively open, and was not seen in 1995. All three plants may have gone as a result of a closing tree canopy.

In 1985 *Thuidium tamariscinum* was regarded as a recent immigrant, but it is now abundant on the floor of the eastern hollow together with *Eurhynchium praelongum*. Jones (1986) remarked on the absence of *Eurhynchium striatum* since it was known to occur in nearby localities; it was found in 1995 although in small quantity. *Platygyrium repens* may be spreading, it was seen on a large birch in the eastern hollow, probably the same tree as Jones recorded it on in 1985, but now also occurs on mature gorse stems on the summit. *Lepidozia reptans* however shows no sign of increasing; it was seen on the base of one birch, in the eastern hollow and is again probably the same colony seen by

Jones in 1985. Of the species recorded for the first time, ten of these are classified as 'increasers' (Bates, 1995), many of which are epiphytes.

The genus *Sphagnum* is very rare in the Oxford district and hence is of great local interest. The greatest number of species that appears to have been recorded at any one time in Chawley Brick Pit is six, and in 1995 there are also six species. Compared to 1985, there appears to be a general increase in the abundance of *Sphagna* in the eastern

Table 1. *The bryophyte flora of Chawley Brick Pit in 1995*

Species present in 1995 (excluding *Sphagna*) not listed in Jones (1986)

- Brachythecium rivulare* – in wet western hollow, locally frequent
Brachythecium velutinum – c.fr., on young oak, rare
Bryum rubens – on track on NE boundary, locally frequent
Calliargon cordifolium – seen in eastern hollow in wet depression
Campylopus paradoxus – on ground in oak-hawthorn scrub
Chiloscyphus polyanthos – on wet ground in western hollow, rare
Cryphaea heteromalla – seen on one elder on top of hill
Didymodon insulanus – on track on NE boundary, rare
Eurhynchium striatum – on ground in oak-hawthorn scrub, rare
Frullania dilatata – on elder and willow, rare
Homalothecium sericeum – on oak, local
Hypnum andoi – c.fr., on elder and oak, occasional
Hypnum cupressiforme var. *cup.* – c.fr., on elder, occasional
Metzgeria fruticulosa – on willow, rare
Metzgeria furcata – on elder, rare
Orthotrichum diaphanum – c.fr., on elder, oak, willow, frequent
Orthotrichum pulchellum – c.fr., on oak and elder, rare
Orthotrichum stramineum – c.fr., on young oak, rare
Phascum cuspidatum – c.fr., on track on NE boundary, local
Plagiothecium succulentum – on sides of E boundary ditch, locally frequent
Polytrichum formosum – on floor of oak-hawthorn scrub and on sandy banks, occasional
Pottia truncata – c.fr., on track on NE boundary, local
Pseudephemerum nitidum – c.fr., on track on NE boundary, local
Pseudotaxiphyllum elegans – on sandy bank of eastern hollow, rare
Radula complanata – seen on one young oak

- Tortula papillosa* – seen on one elder
Tortula ruralis – epiphytic on oak, seen once
Ulota bruchii – c.fr., on oak, occasional
Ulota phyllantha – on oak and willow, rare
Zygodon viridissimus var. *viridissimus* – on elder and willow, rare

***Sphagnum* present in 1995**

- Sphagnum angustifolium* – rare; new to v.-c. 22
Sphagnum fallax – occasional; present in 1985
Sphagnum fimbriatum – frequent; present in 1985
Sphagnum palustre – frequent; last recorded 1962
Sphagnum squarrosum – abundant; present in 1985
Sphagnum subnitens – rare; last recorded 1977

***Sphagnum* not seen in 1995**

- Sphagnum papillosum* – last seen 1962
Sphagnum riparium – last seen 1962

Species present in 1995 and first seen in 1985

- Isoetecium myosuroides* – on base of hawthorn near NE boundary; still rare
Lepidozia reptans – on base of birch in eastern hollow; no change from 1985
Plagiothecium undulatum – a patch on sandy bank of eastern pit; apparently declined
Platygyrium repens – on one birch in eastern hollow, on gorse stems on summit; increasing?
Rhytidiadelphus loreus – large patch in eastern hollow; stable

Species present in 1985 but not seen in 1995

- Bryum argenteum*
Bryum microerythrocarpum
Calliargon giganteum
Calyptogeia muelleriana
Cephalozia bicuspidata
Dicranella cerviculata – possibly now gone
Drepanocladus aduncus
Gymnocolea inflata – possibly now gone
Pellia endiviifolia
Pleurozium schreberi – possibly now gone