ADDITIONAL RECORDS OF PLANT GALLS FROM THE ISLE OF WIGHT

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Only six new galls have been recorded since the publication of the last list of new galls (Biggs, 2007) and one of these was caused by the alternate generation of a gall wasp first found here in 2003.

FUNGI

Sphaerotheca spireae Sawada on Meadowsweet *Filipendula ulmaria.*
At a meeting of the Botanical Section of the Society held at Redway Farm, Merstone, SZ5384 on 16.7.2005 Dave Dana found a plant of Meadowsweet grossly affected by this powdery mildew (*Ascomycota: Erysiphales*) The plant was distorted, with thickened and twisted stems and leaves and completely covered with a thick white growth of the fungal mycelium. Since this first record similar galling has been found at four other sites. This fungus is found throughout Europe, Asia and North America, but only on *Filipendula* and *Spiraea.*

Urocystis violae (Sow.) A.Fischer v. Waldh. on Sweet Violet *Viola odorata.*
Sue Blackwell found leaves of a Sweet Violet galled by this Smut Fungus *(Ustilaginomycetes*) in Froglands Lane, Carisbrooke, at SZ480870 on 27.4.2006 She had noticed that some of the leaves showed pale, thickened patches. Further examination revealed that these were yellowish, roughly circular, 5mm x 4mm and visible on both leaf surfaces. Low power microscopy demonstrated tiny black spherical collections of smut spores. This fungus can also attack the petioles, the leaf veins and the rootstock causing thickening of these parts. It only affects *Viola* and is reported in the literature to be common and widespread in England.

Ustilago hypodytes (Schlecht.) Fries. on Lyme-grass *Lymus arenariae.*
This is another galling Smut Fungus (*Ustilaginomycetes)* which Colin Pope found at Bembridge Point SZ642887 during another field meeting of the Botanical Section on 24.6.2006. Many of the Lyme-grass plants were noticed to have deformed flowering spikes with thickening and twisting of the flower-stalks and to show considerably swollen internodes. Large black spore masses were found beneath the leaf sheaths and small collections of spores in the sterile flower spikes. These are the external manifestations of the fungus which infects the plants systemically, surviving year after year in the rhizomes. This smut affects several different species in the grass family *Poaceae* but is most spectacular in seashore grasses. It is reported to be common and widespread. It can render the plant sterile.

ACARI

Aceria heteronyx (Nalepa) on Field Maple *Acer campestre.*
The Botanical Section meetings have been a rich source of new galls during 2005 and 2006. At the first meeting of 2006 the Society visited Atkey's Copse, Shalfleet on 11th March. On a Field Maple at the very edge of the copse Mike Cotterill noticed some very strange swellings at the base of the bare one-year old twigs. These galls consist of corky, warty irregular swellings 3x5mm forming a complete or almost complete ring around the twigs and a light brown in colour. Sectioning one at the time I was surprised not to find a central cavity with a larva. Later, using a low power microscope it was obvious that each annular growth was formed of several individual galls, each 1 - 2mm across, merging together. High power microscopy revealed the corky interior to contain many gall mites *(Eriophyidae)* Apparently this gall is also found on Norway Maple *Acer platanoides* on the continent. It is described as rare in England in the most recent literature.

DIPTERA

Lapsioptera carophila F. Löw. 1874 on Hemlock Water-dropwort *Oenanthe crocata*

A walk from Guyer's Heath towards Watchingwell on 23.6.2006 led me past a large patch of Hemlock Water-dropwort. The early fruiting heads showed many swollen achenes, galled by the Gall Midge *Kiefferia pericarpiicola* but more interesting were the several oval or spindle-shaped galls at the base of the umbels. Each swelling measured 15mm in length and 4 mm at its maximum width. Within were visible several separate larval chambers each containing a red gall midge *(Cecidomyiidae)* larva. Later, using the microscope, the larval chambers were seen to be lined by a fungal mycelium. This is a typical 'Ambrosia gall'. The fungal spores are introduced into the plant by the adult female gall midge at the time of egg-laying. These midges have special spore-bearing organs on their abdomens for this purpose. This also of course aids spore-dispersal. The feeding activities of the larva which hatches from the egg cause the gall to develop. The fungus then grows to line the gall chamber and acts as a source of food for the growing larva. This gall midge galls various members of *Apiaceae (Umbelliferae)* particularly *Daucus* and *Pimpinella.* It has been a pest of Caraway in Holland in the past.

HYMENOPTERA

Andricus grossulariae (Giraud 1859) on Turkey Oak Q*uercus cerris*

InVolume 20 of the Proceedings (Biggs, 2004) the arrival on the Island of this gall wasp *(Cynipidae*) was recorded with the finding of the asexual generation gall (Sea anemone Gall) on the acorn cups of our native Pedunculate Oak *Quercus robur.* I had found three poor specimens of these galls at Fairlee on 10.2.2003 and none since. The alternate, sexual generation induces galls on the catkins of the introduced Turkey Oak *Quercus cerris.* These were first recorded in England in May 2000 in Windsor Great Park. Not until 2002 was it shown by Pat Walker of Imperial College that these catkin galls were caused by the same gall wasp species that induces the 'Sea Anemone Gall'. The catkin galls appeared in great numbers on the Island in 2006. The first specimens were found on a tree just behind the beach at Osborne at SZ524954, on 19.5.2006. It is interesting that I found several 'Sea Anemone Galls' on the alternate generation at the old Browndown Range outside Gosport, just four miles across the Solent from Osborne Bay, the previous autumn. An individual gall is somewhat flask-shaped, rather like a tapering blackcurrant and measures 5.5 - 7.5 mm along the vertical axis, and 5.5 mm in diameter across the base. Initially pale green with a covering of fine pink hairs and succulent in texture, the galls develop from the male flowers, usually several on each catkin. As the gall matures it becomes red then black and woody hard and soon loses its covering of hairs. Catkins which are affected tend not to fall so galled catkins can be found on the trees until autumn winds bring them down. Because of their extreme hardness at maturity they can easily be found on the ground in winter. Since first finding these galls at Osborne, they have subsequently been found at Bembridge, Fairlee, Parkhurst Forest, Quarr Abbey Woods, Northwood Park, Dodnor and at Appley Park.

This gall wasp has been expanding its range across Europe since 1992. It is native to South and Southeastern Europe. In 1910 it was only known from North Africa, Italy, Sicily, Hungary, Romania and Austria. By 1965 it had been found in Germany and by 1997 it was known in Spain where Cork Oak *Quercus suber* is its secondary host.

Since its first discovery at Osborne on Turkey Oak I have found the galls there on Lucombe Oak *Quercus x crenata* which is a hybrid between Turkey Oak and Cork Oak, and probably on what is Cork Oak itself. As expected, the alternate generation 'Sea Anemone Gall' was equally widespread on the Island during the summer and autumn of 2006.

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