

Wetland Kerkini Survey: Trap summary 01; Malaise traps

by Gordon Ramel 20th September 2009

Introduction.

Lake Kerkini is an artificial lake, created in 1932 on the river Strymon immediately south of the Greek border with Bulgaria and 80 km north of Thessaloniki. The area was originally an inland delta, a huge marsh where the river unloaded the debris it had collected on its journey past the Ryla and Pirin mountains of Bulgaria, and as a wetland habitat it was unique in Europe. The area is currently a RAMSAR and NATURA2000 site as well as a Wetland of International Importance for birds.

To the north the lake is bounded by the 2,000, metre Serbo-Macedonian massif (Kerkini mountains) which forms the border with Bulgaria but which is split by the narrow Ruppel Gorge through which the river enters Greece. To the southwest the lake is bordered by the 1,000 metre Mavrovouni mountains. The nature reserve includes parts of both of these mountain ranges, extending to the summit of the Kerkini mountains, all of the riverine habitat between the border and the lake, about 20 km, and has a total area of about 200 square km. The vegetation of the area is classified as para-mediterranean and mountainous mediterranean. Wetland Kerkini is the largest national park in Greece.

The Longitude, latitude and altitude data supplied for the traps are from a Garmin 12 XL GPS

The duration that each trap was run was not scientifically chosen in many of the cases but arose as a result of a variety of negative influences, the exceptions to this were the Beles, Ramna and Petritsi traps which were all run for a year and the Procom trap which was run for most of a year over two separate years. Of the other trap sites Strymon (site 1 below) was terminated when the trap was stolen, Lithotopos (site 3 below) was terminated after the 2nd occurrence of vandalism required the trap to be dismantled for extensive repairs, Kerkini (site 4 below) was terminated when unseasonal snow and unusually strong winds destroyed it and Midway (site 13 below) which was destroyed in a storm. The collecting bottles for each of the traps were half filled with 70% ethyl alcohol and the specimens, after being sorted under a binocular microscope were stored in plastic vials in 70% ethyl alcohol before being posted from Greece to various locations for identification.

The sites:-

Site 1; Strymon River Site. North = 41°15'20,8 East = 023°14'11,2 Altitude = 30 m a.s.l. This trap was run from 23rd March 2004 until 11th of May 2004. It was situated at an within an area of marshy vegetation nearby to the river Strymon. It was a damp site with surface water nearby and lush vegetation, the dominant trees were Alders, *Alnus glutinosa* and Willows, *Salix sp.*, the area was grazed by buffaloes, cattle, goats and sheep.

Vegetation

No further vegetation analysis was done.

Site 2; Kerkin Mountains Site (Beles). North = 41°17'19,5 East = 023°12'18,4, Altitude = 550 metres a.s.l. This trap was run from the 30th of April 2004 until 5th of June 2005 but was allowed to go slack from December to March to prevent it being weighed down and possibly torn by snow. This trap was situated on the south facing side of Kerkini mountains. It was a rich meadow, cut about twice a year, backing onto mixed deciduous forest. It is a relatively moist habitat on siliceous soils, damper than sites 2 and 3 with much more luxurious vegetation, but less damp than site 1. The meadow is on the site of the old village of Ramna that was abandoned after WW2, it is fenced off, so it is not subject to any grazing, or dunging pressure. It changes drastically throughout the year, by June the vegetation is two metres tall in places, but the snow in winter flattens all the herbaceous vegetation.

Vegetation

Trees = *Platanus orientalis*, *Acer campestre*, *Acer platanoides*, *Carpinus betulus*, *Sambucus nigra*, *Tilia tomentosa*, *Prunus sp.*

Herbs = *Urtica dioica*,



Site 3; Lithotopos Village Site. North = 41°07'52,2 East = 023°12'53,3 Altitude = 75 metres a.s.l.. This trap was run from 18th July 2004 until 23rd of September 2004. The trap was situated immediately behind the village of Lithotopos on uncultivated ground with rough grass and *Paliuris spina-christi*. This was a dryish habitat on a siliceous soil of a north facing slope that experienced intermittent grazing by both sheep and goats. The trap was vandalized and repaired in situ twice while it was up, after the third case of vandalism the trap had to be taken down for more extensive repairs and was not replaced.

Vegetation

No further vegetation analysis was done.

Site 4; Kerkini Lake Site. North = 41°09'06,5 East=023°11'55,0 Altitude = 75 metres a.s.l.. This trap was run from 14th February 2005 until 1st of July 2005. The trap was situated 400 meters south of the lake. It was in the edge of an olive orchard beside the fence, there was a hedge of native vegetation, dominated by *P. spina-christi*, about 5 metres wide and a more mature olive plantation behind this. This is a dryish habitat on a siliceous soil of a north facing slope with no grazing, 2.5 kilometres from the nearest village. This was the repaired trap from site 3 it was destroyed during a storm.

Vegetation

No further vegetation analysis was done.



Site 5; Ecotourism Site. North = 41°08'15,6 East=023°13'01,2 Altitude = 65 metres a.s.l.. Run from 2/05/2006 to the 18/09/2006. This is a reasonably anthropogenic site, being set in a fallow field adjacent to the Centre for the Promotion of Ecotourism in Lithotopos. There is a small amount of building refuse on the site and it has been irregularly grazed for many years. The ground is stony, with a few trees around, mostly *Paliuris spina-christi* and planted *Acer sp.*. The vegetation is otherwise mixed herbaceous/graminaceous and contains quite a few flowering plants. The soil is thin, the ground is stony and it has a north facing aspect.

Vegetation

No further vegetation analysis was done.

Site 6; Kerkini Marsh Site. North = 41°13'32,8 East=023°05'04,2 Altitude = 45 metres a.s.l.. Run from 14/03/2007 until the 2/05/2007. This was a small marsh on the northern edge of the village of Kerkini. Part of the site of the old river bed (the river was redirected in the 1950s) this site was supplied with a continual supply of fresh water from a standing pipe, I have no idea where the water came from but it acted like a spring. An area of about 100 square metres was covered in a shallow flow, 5 to 15 cms deep, and supported a lot of emergent vegetation. Immediately to the west, and across the road to the east, were areas of reed and deeper water. Unfortunately the town council bulldozed the area into oblivion, dug a thin straight channel for the water and turned it into a dumping site for builder's waste, which is why the trap was discontinued so abruptly.

Vegetation

No further vegetation analysis was done.

Site 7; Pumping St. Site. North = 41°12'48,7 East=023°06'11,9 Altitude = 37 metres a.s.l.. Run from 9/05/2007 until 24/07/2007. This was within the fenced off area surrounding a pumping station that moved water out of the lake and into the canal system for the western side of the lake. It was relatively ungrazed, and stood adjacent to a canal bordered with willows and reeds. It was moist site producing lush herbs and grasses. This trap was old when it was put up and eventually the material deteriorated beyond repair and it was discontinued.

Vegetation

No further vegetation analysis was done.

Site 8; Timber Yard Site. North = 41°13'29,2 East=023°05'07,9 Altitude = 45 metres a.s.l.. Run from the 23/05/2007 to 29/05/2007. This trap was inside the yard of a timber merchant, stood beside a large pile of uncut logs (Poplar sp.) with an arable field behind it. It was only run for a week to see if there were a lot of cerambycids and bupestrids visiting the yard.

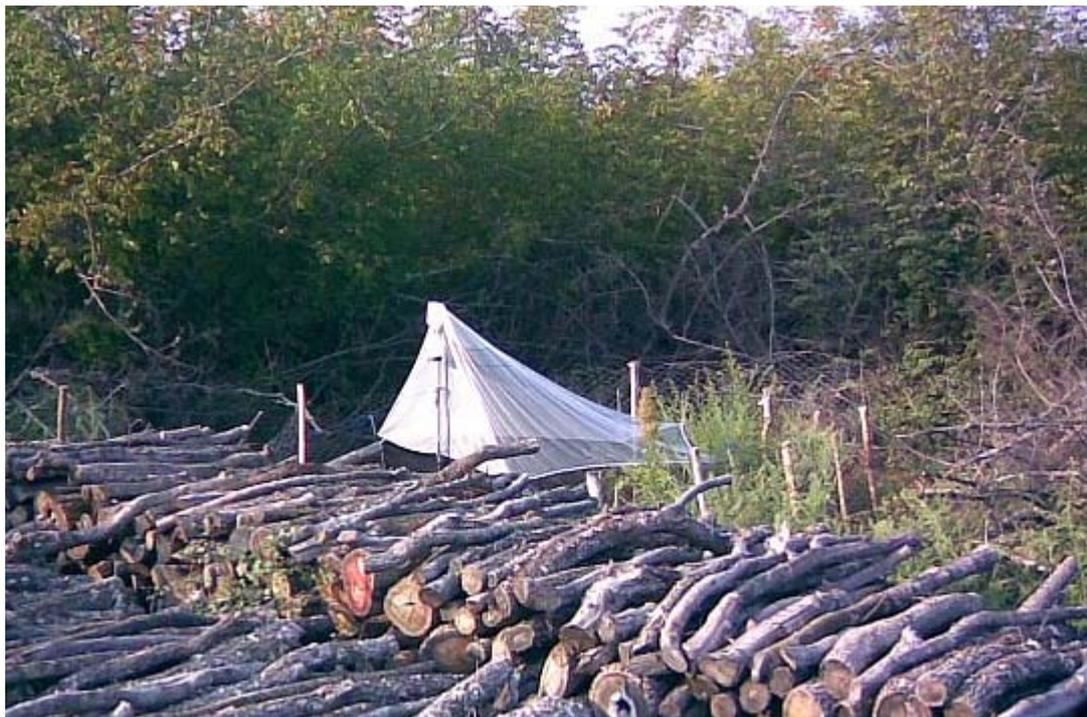
Vegetation

No further vegetation analysis was done.

Site 9; Krousia Mountains Site. North = 41°11'32,4 East=023°03'59,5 Altitude = 190 metres a.s.l.. Run from 30/05/2007 until 18/09/2007. This trap was on the lower, north facing slopes of the Krousia mountains. It was situated immediately beside a large stack of cut timber (mostly oak), with a number of other stacks nearby. The immediate vegetation was *Paliuris spina-christi* and *Carpinus orientalis*. A little further off 20+metres there was a mixed deciduous forest, dominated by Downy Oak (*Quercus pubescens*). This trap was occasionally baited with freshly cut branches and or rotting fruit. It was taken down shortly after the timber was removed.

Vegetation

No further vegetation analysis was done.



Site 10; Procom Site. North = 41°22'38,1 East=023°21'51,8 Altitude = 60 metres a.s.l.. Run from 23/5/2007 until 25/09/2007 and then from 4/02/2008 until 11/05/2008 . This trap was situated in a glade created by a massive fallen tree in a riverine forest along the banks of the River Bisistrisa north of the village of Promohonas and half a kilometer from the shopping complex of Procom. At this point the river delineates the Greek border with Bulgaria. The forest is continuous for some kilometers and extant on both sides of the river. It is grazed very little, if at all, (by goats), and relatively untouched – no logging in the last 50 years at least. However the understory vegetation is seriously effected by regular inundations during flooding in spring and early summer. The dominant trees are *Populus alba*, *Juglans regia*, and *Corylus avelena* the lower vegetation is dominated by brambles (*Rubus* sp.) and an unidentified equisetum that grows to a height of 1.7 metres by late July.

Vegetation

No further vegetation analysis was done.



Site 11; Ramna Site. North = 41°17'42,5 East=023°11'33,1 Altitude = 630 metres a.s.l.. Run from 24/03/2008 until 22/03/2009. This trap was a small size Czech design that I slightly modified, it was situated immediately beside a fast flowing, permanent stream. It had a south facing aspect and was surrounded by mixed deciduous forest. It was well shaded, and had a good understory until around the 22th of the May when the cows reach it, as of June the first the herbaceous understory was almost completely removed and the cows moved on, however the vegetation never recovered its spring level of cover.

Vegetation

Dominant = *Alnus glutinosa*, *Platanus orientalis*, *Urtica dioica*,

Trees = *Acer campestre*, *Acer platanoides*, *Carpinus betulus*, *Sambucus nigra*, *Tilia tomentosa*, *Prunus* sp.

Herbs = *Asplenium trichomanes*, *Clematis vitalba*, *Cyclamen hederifolium*, *Euphorbia amygdaloides*, *Fragaria vesca*, *Geranium macrorrhizum*, *Hedera helix*, *Lamium maculatum*, *Saxifraga rotundifolia*, *Allium sp.* *Rubus sp.*

Ferns = *Athyrium filix-femina*, *Polypodium vulgare*



Site 12; Farfara Site. North = 41°19'30,5 East=023°15'00,1 Altitude = 750 metres a.s.l.. Run from 24/03/2008 until the 7th December 2008. This trap was a small size triangular Czech design trap that I slightly modified, it was situated immediately beside a fast flowing, permanent stream (called Sultanitsa locally). It had a north-east facing aspect and was considerably colder than Ramna which has a similar altitude, the surrounding forest was Beech with some Alder along the stream edge. The trap is in a slightly un-natural position being on a ledge created by the cement works that direct the stream under the road.

Vegetation

Dominant = *Fagus sylvatica*, *Rubus sp.*,

Trees = *Acer platanoides*, *Alnus glutinosa*, *Carpinus betulus*, *Corylus avellana*, *Salix caprea*, *Sambucus nigra*.

Herbs = *Clematis vitalba*, *Eupatorium cannabinum*, *Galium aparine*, *Geum urbanum*, *Hypericum hirsutum*, *Hypericum perforatum*, *Lysimachia punctata*, *Petasites hybridus*, *Plantago lanceolata*, *Plantago major*, *Sambucus ebulus*, *Solanum dulcamara*, *Tussilago farfara*, *Urtica dioica*, *Achillea sp.* x2, *Anthemis sp.*, *Artemisia sp.*, *Campanula sp.*, *Epilobium sp.*, *Euphorbia sp.*, *Mentha sp.*, *Scrophularia sp.*, *Verbascum sp.*, *Carex pendula*, *Atropa bella-donna*, *Rumex acetosella*, *Stachys sylvatica*, *Digitalis lanata*, *Circea lutetiana*

Grasses etc. = *Bromus sp.*, *Juncus effusus*, *Trifolium sp.*,



Site 13; Midway Site. North = 41°18'49,8 East=023°16'35,6 Altitude = 750 metres a.s.l.. Run from 12/05/2008 until the 14th of September 2008 when it was destroyed in a storm. This was the standard full sized British design malaise moved from the Procom site. It was situated on a dry, sunny, south-facing slope with a mixed deciduous forest. It was on an abandoned cleared track (5 metres wide on average) with a rich herbaceous plant community along it.

Vegetation

Dominant = *Quercus sp.*, *Marrubium peregrinum*.

Trees = *Acer campestre*, *Carpinus betulus*, *Cornus mas*, *Crateagus monogyna*, *Fraxinus ornus*, *Ostrya carpinifolia*.

Herbs = *Chicorium inthybus*, *Echium italicum*, *Hypericum montbretii*, *Hypericum perforatum*, *Buglossoides purpureocaerulea*, *Salvia sclarea*, *Teucrium chamaedrys*, *Convolvulus sp.*, *Euphorbia sp.*, *Onopordum acanthium.*, *Thymus sp.*, *Trifolium sp.*, *Verbascum sp.*, *Onopordum acanthium*

Grasses = *Bromus sp.*, *Koeleria sp.*



Site 14; Beabies Site. North = 41°19'15,4 East=023°13'39,6 Altitude = 1,150 metres a.s.l.. Run from 24/03/2008 until the 30/11/2008. This trap is the full size Czech design trap from Krousia 2007, it was situated beside a fast flowing, permanent stream (Sultanitsa, same as above and below). It was in a natural mixed Beech x Spruce forest, with a few other tree species mixed in. It had a north-north-east facing aspect and there was still snow falling there in April. Although this site is logged, about once every 25 years it is otherwise undisturbed.

Vegetation

Dominant = *Abies alba*, *Fagus sylvatica*

Trees = *Acer platanoides*, *Ostrya carpinifolia*, *Salix caprea*, *Sambucus nigra*,

Herbs = *Digitalis viridiflora*, *Epilobium angustifolium*, *Eupatorium cannabinum*, *Euphorbia amygdaloides*, *Fragaria vesca*, *Galium aparine*, *Geranium robertianum*, *Geum urbanum*, *Hypericum hirsutum*, *Hypericum perforatum*, *Impatiens noli-tangere*, *Polypodium vulgare*, *Oxalis acetosella*, *Saxifraga rotundifolia*, *Solanum dulcamara*, *Stachys sylvatica*, *Tussilago farfara*, *Veronica beccabunga*, *Veronica chamaedrys*, *Rubus* sp., *Scrophularia* sp., *Veronica* sp.,

Grasses etc. = *Athyrium filix-femina*, *Dactylis glomerta*, *Equisetum* sp., *Luzula multiflora*, *Melica uniflora*,

Ferns = *Athyrium filix-femina*,



Site 15; Sultanitsa Site. North = 41°19'02,1 East=023°12'05,0 Altitude = 1,485 metres a.s.l.. Run from 28/04/2008 until the present. This trap was situated over the bog/seep that is the start of the Sultanitsa stream. This was an entirely home-made trap in the shape of a simple cone of blue material leading to a collecting bottle. It was placed immediately above the place where the bog turns into a stream and enters the Beech forest., it faced down hill into the forest. The glade is the result of human endeavour, and the army used the site for something about 50 years ago, but it is has been abandoned since then, it is grazed by cattle in late Spring or early summer.

Vegetation

Dominant = *Fagus sylvatica*, *Juncus effusus*

Trees = *Acer platanoides*, *Corylus avellana*, *Malus sp.*, *Prunus sp.*,

Herbs = *Alchemilla cinerea*, *Plantago major*, *Ranunculus sardous*, *Urtica dioica*, *Viola tricolor*, *Cirsium sp.*, *Dorycnium herbaceum*, *Mentha sp.*, *Myosotis sp.*, *Nonea sp.*, *Ranunculus sp.*, *Scrophularia sp.*, *Stellaria sp.*, *Verbascum sp.*,

Grasses = *Dactylis glomerata*, *Eriophorum latifolium*

Ferns = *Pteridium aquilinum*



Site 16: Stratiom Site. North = 41°17'44,9 East=023°17'36,6 Altitude = 420 metres a.s.l.. Run from 5/05/2008 until the 06/07/2009. This was the third small Czech design trap, moved from Cafe Elodia, and it caught very little, I am not sure why. It was situated on a south facing slope covered in herbs and grasses, 6 metres behind it was the *Quercus coccifera* forest that dominates these dry steep hillsides. The trap got so hot in mid summer it lost all of the alcohol put in the bottle, even when the bottle was filled completely, so the trap was terminated. It is named after the abundance of Stratiomyidae seen there in April.

Vegetation

Dominant = *Phillyrea latifolia*, *Quercus coccifera*, *Aegilops triuncialis* & *Marrubium peregrinum*.

Trees and shrubs = *Fraxinus ornus*, *Arbutus unedo*, *Cotinus coggygria*

Herbs = *Chicorium inthybus*, *Consolida regalis*, *Hypericum perforatum*, *Malva sylvestris*, *Salvia sclarea*, *Teucrium polium*, *Achillea clypeolata*, *Allium sp.*, *Artemisia sp.*, *Centaurea x2 sp.*, *Euphorbia sp.*, *Linum sp.*, *Stachys sp*, *Thymus sp.*, *Xeranthemum annuum*, *Daucus carota*, *Trifolium arvense*, *Artemisia sp.*, *Eryngium sp.*(not *campestre*), *Carthamus lanatus*, *Echium italicum*

Grasses = *Avena sterilis*, *Bromus sp*, *Melica uniflora*, *Trifolium sp.*



Site 17: Petritsi Stream Site. North = $41^{\circ}17'43,7$ East= $023^{\circ}17'12,6$ Altitude = 250 metres a.s.l.. Run from 11/02/2008 until the 15/02/2009 this was a smaller home made trap based on the standard British malaise trap design. It was situated immediately beside a permanent stream (Sultanitsa as above) 1 km (by road) up into the Kerkini Mountains from the village of Neo Petritsi. It is had a south facing aspect and was surrounded by Plain Trees (*Platanus orientalis*). The area away from the stream is sharply inclined and dominated *Qercus coccifera*. The area is grazed to some extent by sheep and goats but otherwise untouched.

Vegetation



Site 18: Café Elodia Site. North = 41°12'51,6 East=023°05'45,4 Altitude = 40 metres a.s.l.. Run from 4/02/2008 until the 17/02/2008 when I moved it about 120 metres to = 41°12'46,8 East=023°05'42,9 where it has run from 18/02/2008 until 23/4/2008. It was originally a full sized Malaise trap, on the 24/4/2008 I removed the full-sized trap and replaced it with one of the smaller more open Czech traps. The trap was closed down completely on the 27/4/2008, this site is on the eastern side of the village of Kerkini in an area of rough grassland alongside the marshes of the old river bed (see site 6). The trap was immediately adjacent to the reeds and a willow (*Salix* sp.), about 2 metres from the actual water.

Vegetation

No further vegetation analysis was done.



Site 19: Helicopter site. North=41°20'25,7 East=023°13'58,5 Altitude = 1245m a.s.l. Run from 09/6/2008 until 05/10/2008. This is an entirely home made trap in the shape of a simple cone of yellow of material leading to a collecting bottle. The trap was placed on a northeast facing edge of a grassed slope leading into a mixed deciduous forest.

Vegetation

Dominant = *Fagus sylvatica*, *Pteridium aquilinum*

Trees = *Acer campestre*, *Prunus* sp., *Salix* sp.,

Herbs = *Hypericum olympicum*, *Hypericum perforatum*, *Juniperus communis*, *Plantago lanceolata*, *Rhinanthus trixago*(*rumelicus* ili *angustifolius*), *Sambucus ebulus*, *Achillea* sp., *Armeria* sp., *Chamaecytisus* sp., *Galium* sp., *Hieracium* sp., *Linaria* sp., *Potentilla* sp., *Rosa* sp., *Salvia* sp., *Trifolium arvense*

Grasses = *Briza media*,

