A preliminary list of the spiders of Cazorla

C. I. CARTER.

The following records in the Coto Nacional de las Sierras de Cazorla y Segura were made during an intensive collecting period in May, 1979. Three methods of collecting were used. The first included sweeping herbs and bushes with a sweep-net and beating tree foliage with a beating-tray to sample both those species that make webs on vegetation and those that inhabit flowers and foliage. The second method was by searching the bare ground and under stones and collecting with a pooter. The third method was by using a series of pitfall traps containing ethylene glicol as a preservative to collect nocturnal and ground dwelling species.

Eighteen sampling stations were established ranging from the water margin of the Embalse del Tranco, the Río Guadalquivir valley and its tributaries, the lower elevation woodlands through to the grazed meadows to the karst limestone district at 1700 m. Five pitfall traps were placed at each of 11 of these sampling

stations for a period of 8-10 days.

The 3 sampling methods produced essentially a different list of species at each location.

The majority of the specimens collected have been identified. Some of these are marked with a question because they are immature and lack positive identification features and others because they do not totally agree with the description of a species and might possibly therefore be some other hitherto undescribed species or subspecies. Several specimens of two families, the Salticidae and Lycosidae, have not been identified yet and will be the subject of a subsequent publication. The species marked with an asterisk are possibly new records for Spain since they do not appear in the comprehensive lists of Fernández Galia-NO (1910) OF PÉREZ DE SAN ROMÁN (1947).

CTENIZIDAE.

Nemesia sp.

Alpine meadow Empanadas, 24-V-79, colony of more than 50 immatures at 1560 m, occurring in the grazed turf of Thymus and other short herbs.

Several species of Nemesia are known in Spain. Only one colony was found in Cazorla presumably of a single species. No other evidence of trap-door spiders were found elsewhere in Cazorla.

ATVPIDAE.

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* Atypus sp.

Collado de los Almendros, 30-V-79, 1 à taken in pitfall trap on a bank near Quercus ilex scrub. Purse webs also seen where wild boar had been digging for food.

A. affinis (Eichwald) is the only species of the genus Atypus recorded by Pérez de San Román (1947) in Spain. This male is not of that species.

ULOBORIDAE.

Uloborus walkanaerius LATREILLE.

River Valley towards Cortijo Nuevo, 26-V-79, 1 & on sparse wayside vegetation; Collado de los Almendros, 30-V-79, 1,2 from sweeping low bushes. Recorded widely from Spain, but very local in NW Europe where it has been found on sandy heathland.

Hyptiotes paradoxus (C. L. K.).

Loma de la Sarga, 21-V-79, 1 $\stackrel{\circ}{\circ}$ from beating tomillares scrub 1150 m. Recorded from Burgos and Cataluña; very local in NW Europe where it is known from evergreen shrubs.

AMAUROBITDAE.

Titanoeca monticola (SIMON).

Bujaraiza, Los Casares, 30-V-79, 13 & taken in pitfall traps on a terraced bank with a southerly aspect.

Recorded from Gerona, it is remarkable that this species has been found in only one site in Cazorla, and these all males.

DICTYNIDAE.

Dictyna arundinacea (L.).

Loma de la Sarga, 29-V-79, 1 & from beating low scrub 1150 m.

Recorded from Spain and Western Europe. It is usually to be found making small webs with a retreat on the dead flower heads of plants such as Rumex.

* Lathys humilis (BLACKWALL).

Near 10 Km post, 27-V-79, 1 9 and 2 imms from beating Quercus faginea and Acer monspessulanum 750 m.

Locally common in Britain where it is beaten from bushes.

* Argenna subnigra (O. P.—Cambridge).

Golondrina, 25-V-79, 2 9 on water margin vegetation, 650 m.

A rare, southern species in Britain, found under stones and on bushes.

* Oecobius maculatus Simon.

La Hortizuela between 18 and 19 km posts, 31-V-79, 1 & in pitfall trap on dry river bed.

A similar species O. annulipes L. C. is also recorded from Spain.

FILISTATIDAE.

Filistata sp.

River valley towards Cortijo Nuevo, 26-V-79, 1 immature 9 found amid roadside vegetation.

F. insidiatrix (FORSKAL) is widely recorded in Spain.

Dysderidae.

Harpactea hombergi (Scopoli)?

Bujaraiza, Los Casares, 30-V-79, 1 3 in pitfall trap in new P. halepensis

H. hombergi is known from Galicia, Burgos and Valencia. In Britain it is to be found in silken cells in dry places, under bark, stones, dry compacted grasses.

SCYTODIDAE.

Scytodes thoracica LATREILLE.

Sierra de Cazorla, Fuente de Cocón, 29-V-79, 1 à in pitfall trap under old pine trees 1200 m.

Recorded from central Spain; in Britain where it occurs in the south, it is nocturnally active and found to hunt on the walls of buildings.

PHOLCIDAE.

* Crossopriza sp.

Río Borosa, 29-V-79, 1 a and 1 9 in stone scree 880 m.

C. pristina Simon has been recorded from Spain. The above pair do not agree with that species and the species is probably new to Spain.

GNAPHOSIDAE.III. - C. C. Carsander, surrogat.

Drassodes lapidosus (WALCKENAER). A CHARLEST ONLY

Bujaraiza, Los Casares, 20-V-79, 1 & and 1 \times under stones; Arroyo de la Mesa, 27-V-79, 1 \tilde{\pi}, 1 \text{ sub } \tilde{\pi}, 1 \text{ sub } \tilde{\pi} \text{ and } 1 \text{ imm on stony bank; Arroyo de la Campana, 25-V-79, 1 \tilde{\pi} \text{ and } 1 \times \text{ on dry sandy bank.}

Widespread in Spain and Western Europe.

Haplodrassus dalmatensis (L. Koch).

La Hortizuela, 31-V-79, 1 & in pitfall trap among stones by the river 600 m. Recorded from Ciudad Real; a rare species in southern Britain found on ericaceous plants.

* Zelotes costatus DENIS.

Collado de los Almendros, 30-V-79, 1 & in pitfall trap near evergreen scrub; Bujaraiza, Los Casares, 30-V-79, 2 & in pitfall trap in new *Pinus halepensis* plantation.

Zelotes carmeli O. P.-C.

Bujaraiza, Los Casares, 30-V-79, 2 3 and 1 2 in pitfall trap in new Pinus halepensis plantation.

Scattered records from locations in southern Spain.

* Zelotes thorelli SIMON.

Collado de los Almendros, 30-V-79, 1 & in pitfall trap near evergreen scrub; Sierra de Empanadas, 29-V-79, 1 & under stones on mountain top 1740 m.

Zelotes rubicundulus (SIMON).

Bujaraiza, Los Casares, 30-V-79, 1 & in pitfall trap in new Pinus halepensis plantation.

Recorded from Madrid.

Zelotes holosericeus (SIMON).

Bujaraiza, Los Casares, 30-V-79, 1 & in pitfall trap in new Pinus halepensis plantation.

Recorded from Spain, Sevilla.

* Zelotes fuscipes (L. Koch).

Bujaraiza, Los Casares, 30-V-79, 2 \(\rightarrow \) in pitfall trap in new Pinus halopensis plantation.

* Gnaphosa occidentalis SIMON.

Cotorríos, 31-V-79, 1 \circ and 1 sub \circ in pitfall trap among dry stones by the river.

Very restricted in Britain.

Nomisia exornata (C. L. Koch).

Bujaraiza, Los Casares, 30-V-79, 1 & in pitfall trap amid young Pinus hale-pensis. Recorded from Spain and Mediterranean countries.

ZODARIDAE.

* Zodarion marginiceps SIMON.

Sierra de Cazorla, Fuente de Cocón, 29-V-79, 1 3 and 1 9 in pitfall traps on the edge of *Pinus* woodland.

Zodarion styliferum SIMON (?).

Bujaraiza, Los Casares, 30-V-79, 14 ô in pitfall traps in a new Pinus hale-pensis plantation.

These specimens may not be Z. styliferum but are very similar. Z. styliferum is known in Central Spain and Portugal.

CLUBIONIDAE.

* Clubiona genevensis L. Koch.

Cotorrios, 26-V-79, 1 \(\text{p} \) by sweeping riverside margin vegetation; Loma de la Sarga, 21-V-79, 1 \(\text{p} \) by beating low bushes.

Widely distributed but local in Western Europe.

Anyphaenidae.

Anyphaena accentuata (WALCKENAER).

Bujaraiza, 26-V-79, 1 \(\text{and 25 immatures by beating broadleaved trees} \) Near 10 km post, 27-V-79, 2 \(\text{p by beating Quercus faginea and Acer monspessulanum.} \)

Known from Gerona, Barcelona, Cataluña and other parts of Western Europe on trees and bushes.

SPARASSIDAE.

K. B. PAIR Some

Micrommata virescens (CLERCK).

Collado de los Almendros, 1 & in pitfall trap near evergreen scrub. Found in the milder parts of Europe, usually in luxuriant woodland glades.

THOMISIDAE.

Tmarus sp.

Bujaraiza, 26-V-79, 1 sub 2 by beating evergreen Quercus and Arbutus foliage.

Three species of this genus are recorded from Spain, mainly in the north.

Thomisus onustus WALCKENAER.

Bujaraiza, Los Casares, 20-V-79, 1 immature by searching; Loma de la Sarga, 21-V-79, 1 \(\rho\$ by beating low bushes; Cotorrios, 23-V-79, 1 \(\rho\$ in Pentastemon flower; La Hortizuela, 23-V-79, 1 \(\rho\$ and 2 immatures by sweeping riverside vegetation 600 m.

Well recorded from all-over Spain and the warmer parts of Europe, usually found on flowers.

found on flowers.

Misumena vatia (CLERCK).

Bujaraiza, 26-V-79, 1 9 by beating broadleaved trees. Well recorded from Spain and western Europe, found in open flowers.

Xysticus kochi THORELL.

Arroyo del Infierno, 29-V-79, 1 & and 1 immature in pitfall trap in grazed meadow 1560 m.

Few records from Spain, probably commoner in Northwest Europe where it is to be found on bushes.

Xysticus erraticus (BLACKWALL).

Parador, 27-V-79, 1 9 by beating Juniperus 1200 m.

Recorded from Ciudad Real. In western Europe it is uncommon, but well distributed and is usually found on bushes.

Philodromus aureolus (CLERCK).

Río Borosa, 28-V-79, 1 \circ under stones 880 m; Cotorrios, 31-V-79, 1 \circ on Cistus.

Recorded from Gerona, Barcelona and Cataluña, probably much commoner in Northwest Europe.

Philodromus buxi Simon.

Arroyo de la Campana, 25-V-79, 1 \(\rightarrow \) by sweeping riverside vegetation; Bujaraiza, 26-V-79, 1 \(\rightarrow \) from beating broadleaved trees; near 10 km post, 27-V-79, 2 \(\rightarrow \), 1 \(\rightarrow \) and immature, by beating Quercus faginea and Acer monspessulanum.

· Recorded from Burgos and Madrid. Very rare in Britain.

* Philodromus rufus WALCKENAER.

Loma de la Sarga, 21-V-79, $3 \circ by$ beating scrub 1150 m; Cotorríos, 26-V-79, $1 \circ by$ sweeping riverside herbs; Bujaraiza, 26-V-79, $2 \circ and 5$ immatures, by beating broadleaved; near 10 km post, 27-V-79, $1 \circ box{rom}$ broadleaved trees.

Usually found on bushes and herbs in woodlands.

* Thanatus formicinus (CLERCK).

Collado de los Almendros, 20-V-79, 2 \circ from Sarothamnus scrub; Los Arenales, 29-V-79, 2 \circ in pitfall traps, 1 \circ on bare sand 1500 m; Parador, 27-V-79, 1 \circ on bare sand 1200 m; Loma del Caballo, 29-V-79, 2 \circ among stunted Helianthemum vegetation 1400 m.

Very rare in southern Britain, but apparently more common towards the south of Europe.

Synema globosum (FABRICIUS).

Collado de los Almendros, 20-V-79, 1 \(\text{on } \) on Sarothamnus; Loma de la Sarga, 21-V-79, 2 immatures from beating scrub; La Hortizuela, 23-V-79, 1 \(\text{v} \) by sweeping vegetation; Arroyo de la Campana, 25-V-79, 7 immatures by sweeping riverside vegetation; Bujaraiza, 26-V-79, 1 immature from beating broadleaves; near 10 km post, 27-V-79, 1 immature from beating broadleaved trees.

A well recorded species in Spain and Mediterranean districts. Two colour forms occur, one red another pale yellow.

SALTICIDAE. (B. Mar. 7) Single

Salticus scenicus (CLERCK).

Collado de los Almendros, 20-V-79, 3 à and immature forms on Sarothamnus bushes; Loma de la Sarga, 21-V-79, 1 à by beating scrub, 1150 m; La Hortizuela, 31-V-79, 1 immature by beating Arbutus foliage.

Well recorded from Spain and Northwest Europe where it occurs on sunny

walls near to buildings.

* Salticus zebranus (C. L. Koch).

Near 10 km post, 27-V-79, 2 8 by beating Quercus faginea and Acer monspessulanum.

Very rare in Britain.

Heliophanus cupreus (WALCKENAER).

Collado de los Almendros, 20-V-79, 1 \circ and 1 immature \circ by beating bushes; Cotorrios, 26-V-79, 1 \circ by sweeping riverside bushes; Arroyo de la Campana, 25-V-79, 2 \circ by sweeping riverside bushes; near 10 km post, 27-V-79, 3 \circ and 1 immature \circ by beating *Quercus faginea* and *Acer monspessulanum*; Arroyo de la Mesa, 27-V-79, 1 \circ by sweeping bushes 1000 m.

Well recorded from Spain and western Europe, usually on low vegetation.

* Bianor aenescens (SIMON).

Loma de la Sarga, 21-V-79, 1 9 by beating scrub 1150 m. Known in Northwest Europe on short vegetation.

Ballus depressus (WALCKENAER).

Bujaraiza, 26-V-79, 1 ♀ by beating broadleaved trees.

Known from Gerona, Barcelona and Madrid. Considered to be a woodland species in southern Britain.

* Synageles venator (Lucas).

Arroyo de la Campana, 25-V-79, 1 2 by sweeping riverside herbs. An antmimic, seldom encountered but associated with waterside vegetation.

Myrmarachne formicaria (DEGEER).

Fuente de Cocón, 29-V-79, 1 º in pitfall trap on edge of pinewood 1200 m. A well recorded but uncommon ant-mimic. Large numbers of ants were present and trapped in this habitat.

* Pellenes tripunctatus (WALCKENAER).

Arroyo de la Mesa, 27-V-79, 1 \(\rightarrow \) by searching on stony bank 1000 m. A little known species.

OXYOPIDAE.

Oxyopes heteropthalmus LATREILLE.

Cotorrios, 26-V-79, 2 9 and 20 immatures from sweeping riverside vegetation for 60 minutes; La Hortizuela, 23-V-79, 2 3 and 3 immatures from sweeping riverside vegetation for 30 minutes; La Golondrina, 25-V-79, 1 immature by searching marsh vegetation; Arroyo de la Campana, 25-V-79, 8 immatures by sweeping riverside herbs; near 10 km post, 27-V-79, 1 immature by beating trees.

Common in the Iberian peninsula, seldom found in Britain. An active species to be seen during the day on low vegetation.

Although found in various parts of Cazorla none of the specimens occurred in pitfall traps.

LYCOSIDAE.

Lycosa fasciventris L. Dufour.

Sierra de Empanadas, 29-V-79, 2 & immatures and 3 & immatures by digging out from burrows in limestone fragments 1740 m; Arroyo del Infierno, 29-V-79, similar burrows seen in bare ground (limestone soil) 1560 m; Nava del Espino, 29-V-79, 1 & immature dug out of burrow, several other burrows seen in between limestone fragments in an area at 1400 m where Thymus and Helianthemum plants were scattered.

Recorded from several localities in south-east Spain.

Pardosa monticola (CLERCK).

Los Arenales, 29-V-79, 9 \circ , 4 \circ and 1 immature in a pitfall trap in grassheath community 1500 m; Loma del Caballo, 29-V-79, 1 \circ by searching Helianthemum plant community 1400 m.

Recorded from Gerona, Cataluña, common in open country in Northwest Europe.

* Pardosa prativaga (L. Косн).

La Golondrina, 25-V-79, 3 \circ and 8 \circ found by searching wet marsh (in 30 minutes), 30-V-79, 16 \circ and 16 \circ collected in 5 pitfall traps over 5 days at water level on the marsh.

Pardosa proxima (С. L. Косн).

La Golondrina, 25-V-79, 2 with egg sacs found by searching wet marsh; Loma del Caballo, 29-V-79, 2 p by searching Helianthemum plant community 1400 m.

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Widespread in Spain, less frequent in North Europe where it is known on marshy ground.

Pardosa hortensis (THORELL).

Cotorrios, 22-V-79, 1 9 found in wet plant debris by the river. Recorded in Northwest Europe.

Alopecosa albofasciata (BRÜLLE).

Fuente de Cocón, 29-V-79, 4 & and 1 & in pitfall traps on edge of pinewood 1200 m; Río Borosa, 28-V-79, 1 & found among riverside boulders 800 m. Circum-mediterranean, recorded from Spain.

Alopecosa sp.

La Hortizuela, 31-V-79, 1 immature 9 by beating riverside Arbutus and Ouercus.

* Trochosa ruricola (DEGEER).

La Golondrina, 30-V-79, 2 & in pitfall traps at water level on the marsh. Common in Northwest Europe, found under stones and logs.

Arctosa villica (Lucas).

La Golondrina, 30-V-79, 1 δ and 1 \circ in a pitfall trap at water level on the marsh.

Spain and western Mediterranean in dry places.

PISAURIDAE.

Pisaura mirabilis (CLERCK).

Collado de los Almendros, 30-V-79, 2 è in pitfall traps on the edge of evergreen scrub,

Common and widespread in Europe, often in long grasses.

AGELENIDAE.

Tegenaria sylvestris L. Koch.

Collado de los Almendros, 30-V-79, 4 \circ , 1 \circ and 1 immature in pitfall traps on the edge of evergreen scrub; Fuente de Cocón, 29-V-79, 6 \circ and 1 \circ in pitfall traps on the edge of pinewood 1200 m.

Recorded from Western Europe down to the Pyrenees and in Portugal.

Tegenaria sp.

Cotorrios, 31-V-79, 1 & and 1 immature 9, in pitfall traps in riverside stones.

THERIDIIDAE.

Episinus maculipes CAVANNA.

Loma de la Sarga, 21-V-79, 1 immature, by beating tomillares scrub 1150 m Recorded from Spain and Southern Europe.

* Dipoena tristis (HAHN).

Bujaraiza, 26-V-79, 1 & by beating broadleaved trees.

Found in low bushes and woodland trees in Southern Britain where it is very local.

Dipoena melanogaster (C. L. Koch).

Bujaraiza, 26-V-79, 2 & by beating broadleaved trees; near 10 km post, 27-V-79, 1 & by beating Quercus faginea and Acer monspessulanum.

Found on *Ulex* and other low bushes in Southern England where it is extremely rare.

Theridion sisyphium (CLERCK).

Loma de la Sarga, 21-V-79, 3 & and 1 9 by beating tomillares area 1150 m. Recorded from Salamanca, Ciudad Real, and Sevilla. Commonly found on conifers in Britain.

Theridion tinctum (WALCKENAER).

Bujaraiza, 26-V-79, 1 & and 2 & by beating broadleaved trees; near 10 km post, 27-V-79, 1 & and 1 & by beating Quercus faginea and Acer monspessulanum.

Recorded from Spain. Known from small-leaved low trees in Britain.

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Theridion pallens BLACKWALL.

Bujaraiza, 26-V-79, 4 9 by beating broadleaved trees.

Commonly found on the undersides of leaves on trees throughout Western Europe.

TETRAGNATHIDAE.

Tetragnatha extensa (LINNAEUS).

Arroyo de la Campana, 25-V-79, 1 \Diamond and 2 \Diamond by sweeping riverside herbs; Arroyo de la Mesa, 27-V-79, 1 \Diamond on a web between boulders.

Widespread in Spain and Western Europe, usually found on monocotyledoneous plants near water.

Meta segmentata (CLERCK).

Río Borosa, 28-V-79, 2 immatures on webs between stones on riverside 880 m.

Recorded from north of Spain, abundant in Northwest Europe on bushes and low plants.

ARANEIDAE.

* Araneus sturmi (HAHN)?

Arroyo de la Campana, 25-V-79, 1 immature from sweeping riverside herbs; Parador, 27-V-79, 3 immatures by beating *Juniperus* 1200 m.

Not previously recorded; found on bushes and very local.

Araneus diadematus CLERCK.

Loma de la Sarga, 21-V-79, 1 immature by beating tomillares scrub 1150 m. Well recorded from Northern Spain, abundant in Western Europe on bushes.

Araneus cornutus CLERCK.

Cotorrios, 26-V-79, 3 immatures by sweeping riverside vegetation; Arroyo de la Campana, 25-V-79, 3 immatures by sweeping riverside vegetation; Río Borosa, 29-V-79, 1 immature 9; on web between riverside boulders.

Few records from Spain, frequent in western Europe on tall grasses, often

near water.

Araneus sclopetarius CLERCK.

Bujaraiza, 26-V-79, 2 immatures \circ , by beating broadleaved trees. Río Borosa, 29-V-79, 1 \circ on web between riverside boulders.

Well recorded in Northern Spain usually found near water especially under bridges.

Araneus redii (Scopoli).

glana.

La Hortizuela, 31-V-79, 1 immature by beating trees; Arroyo de la Campana, 25-V-79, 1 \(\text{\$\tilde{9}}\) by sweeping riverside herbs; Bujaraiza, 26-V-79, 1 immature by beating trees; Arroyo de la Mesa, 27-V-79, 1 \(\tilde{\tilde{9}}\) by searching stony bank 1000 m. Cotorrios, 31-V-79, 2 \(\tilde{\tilde{9}}\) on Cistus scrub.

Well distributed in Spain, locally common on low bushes in Western Europe.

Araneus adiantus (WALCKENAER).

Arroyo de la Campana, 25-V-79, 39 immatures and sub-adults by sweeping riverside herbs.

Well recorded in Northern Spain, less common and restricted to mild areas, on bushes, in Northwest Europe.

Araneus cucurbitinus CLERCK.

Collado de los Almendros, 20-V-79, 2 \(\text{a} \) and 2 immatures, by beating Sarothamnus; Loma de la Sarga, 21-V-79, 2 \(\text{a} \) and 4 immatures, by beating tomillares scrub 1150 m; Parador, 27-V-79, 9 sub adults by beating Juniperus 1200 m. Widespread in Spain usually to be found with small webs on deciduous trees.

Zilla diodia (WALCKENAER).

Bujaraiza, 26-V-79, 1 \(\text{p} \) by beating broadleaved trees. Distributed in Spain; known from Calluna and bushes from Southern Britain.

Hypsosinga albovittata (Westring).

Arroyo de la Campana, 25-V-79, 1 à by sweeping riverside herbs. Recorded from Northern Spain; rare in Britain.

Mangora acalypha (WALCKENAER).

Collado de los Almendros, 20-V-79, 2 &, 7 \(\rightarrow \) and 4 immatures from sweeping low scrub. Cotorríos, 26-V-79, 10 \(\rightarrow \) from sweeping riverside vegetation within

60 minutes. La Hortizuela, 31-V-79, 1 immature from beating trees. Arroyo de la Campana, 25-V-79, 1 9 by sweeping riverside herbs. Widely distributed in Spain, found in low bushes.

Cyclosa conica (PALLAS).

La Hortizuela, 31-V-79, 3 3 and 1 9 by beating Arbutus and Quercus foliage. Recorded from Central and Northern Spain, on evergreen and shaded trees and widespread.

Cyclosa algerica.

Arroyo de la Campana, 25-V-79, 1 \(\text{p} \) by sweeping riverside bushes. Parador, 27-V-79, 1 \(\text{s} \), 1 \(\text{q} \), 1 \(\text{sub} \(\text{s} \) and 1 \(\text{sub} \(\text{Q} \) by beating \(Juniperus \). Cotorríos, 31-V-79, 1 \(\text{q} \) on \(Cistus \) scrub.

Known from Spain and North Africa.

Larinia lineata (Lucas).

Cotorríos, 26-V-79, 1 immature from sweeping riverside vegetation. Recorded from Barcelona, Burgos, and Sevilla.

LINYPHIDAE.

* Lepthyphantes tenuis (BLACKWALL).

Collado de los Almendros, 20-V-79, 1

by sweeping scrub. Very common on vegetation in Northwest Europe.

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