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SPIDERS COLLECTED FROM MUD-DAUBER NESTS IN CLARK COUNTY, ARKANSAS

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It is well known that social wasps often use spiders as food for their larvae. They catch the spider, paralyze it by the sting, and carry it to the nest where it is used as food by the young.

The writer has found wasps very helpful in making a thorough study of an area because sometimes they store species which are not found in that specific area by other methods of collection. In many instances an insight into the prevalence of certain species of spiders in an area can be ascertained from the large numbers stored in nests.

An interesting observation in making collections from mud-dauber nests throughout Clark County indicated that emergence of wasps from nests occurred from June until early September. However, in late August and early September very few spiders could be collected from nests because apparently the wasp larvae had used the edible parts of most spiders and only dried unidentifiable remains were found. June and July proved to be the best months for collecting from Hymenopterous nests in Clark County.

Very few spiders could be collected from mud-dauber nests in agricultural regions heavily sprayed with insecticides. In these areas reliable collecting methods such as sweeping the vegetation with a net also failed to reveal spiders in significant numbers. It appeared the population was so small that wasps turned to other food sources for their young.

The solitary fossorial wasps are, however, the spiders' chief enemy, and it is probable that they are more effective in control of the spider population than all other factors combined.

Among the wasps of the family Pompilidae, one of the largest and most important of the group which is spread over most of the world, all species use spiders as the chief food for their larvae. They usually excavate holes in the earth, provide them with spiders deposit eggs and seal the holes. The spiders are stung, paralyzed, remain quiescent, and do not struggle and endanger the young larvae. These paralyzed spiders may live for several weeks during which time they are unable to feed and their movement is very limited. Wasps of this group show great efficiency in attacking even comparatively large spiders and the writer has made plans to more carefully study

Arkansas Academy of Science Proceedings

this group at a latter date. Denny's (1963) removed a paralyzed *Phidippus* spider from a digger wasp nest and kept it in a vial. After two months the spider was still alive; when given water and flies it recovered fully and lived for more than 18 months. Apparently the venom from the wasp acts only as a tranquilizer which subsides in time.

Spears (1965, unpublished M.S. Thesis) collected mud-dauber nests throughout Northern Mississippi and found that two genera, *Trypoxylon* and *Sceliphron* were responsible for most of the nests under bridges and around other similar collecting sites which she used. In the present study of Clark County spiders these two genera were also responsible for the mud-dauber nests from which spider specimens were collected.

Muma (1945) made a special study of the spider prey of several mud-dauber wasps and collected only 10 families. In the Clark County study 12 families and 50 species were collected as opposed to the 10 families and 28 species collected by Dorris (1968) throughout 82 counties of Mississippi.

Studies made in Clark County, Arkansas may be summarized as follows:

1. Rare and uncommon spiders as well as common species were found in nests of mud-dauber wasps.
2. Prey collected by members of *Sceliphron* was limited by the hunting environment of the wasp, size and prevalence of the spiders, and season.
3. Individuals of *Trypoxylon* collected common spiders among foliage apparently preferring species of the genera *Neoscona* and *Eustala* but took almost anything available. Many small or immature spiders common on flowering plants in open areas were also used by members of *Trypoxylon*.

The 12 families and 50 species of spiders the writer collected from mud-dauber nests in Clark County, Arkansas are as follows:

ARANEIDAE

Acacesia hamata (Hentz)

Acanthepeira moesta Comstock

Acanthepeira stellata (Marx)

Araneus miniatus (Walckenaer)

Araneus nordmanni (Thorell)

Araneus marmoreus Clerck

Araneus thaddeus (Linnaeus)

Araneus cavatica (Keyserling)

Neoscona domiciliorum (Hentz)

Neoscona arabesca (Walckenaer)

Eustala anastera (Walckenaer)

Glyptocranium bisaccatum

Comstock

Mangora ornata (Walckenaer)

Metazygia wittfeldae (McCook)

Metepeira labyrinthea (Hentz)

Cyclosa turbinata (Walckenaer)

Neosconella pagnia (Walckenaer)

Alleperia lemniscata

(Walckenaer)

*Arkansas Academy of Science Proceedings***MIMETIDAE***Ero furcata* (Villers)**THERIDIIDAE***Theridion tepidariorum*

(C. L. Koch)

THOMISIDAE*Misumenaps asperatus* (Hentz)*Tmarus angulatus* (Walckenaer)*Misumena vatia* (Clerck)*Synema parvula* (Hentz)*Thanatus formicinus* (Clerck)**GNAPHOSIDAE***Cesonia bilineata* (Hentz)**ULOBORIDAE***Uloborus glomosus* (Walckenaer)**OXYOPIDAE***Oxyopes salticus* Hentz**CLUBIONIDAE***Clubiona obesa* Hentz**SALTICIDAE***Phidippus purpuratus* Keyserling*Phidippus audax* (Hentz)*Phidippus whitmanii* Peckham*Phidippus mystaceus* Emerton*Phidippus rimator* (Walckenaer)*Icius elegans* Emerton*Agassa cerulea* (Walckenaer)*Habronattus coronatus* (Hentz)*Habronattus borealis* (Banks)*Paraphidippus marginatus*

(Walckenaer)

Paraphidippus aurantius (Lucas)*Metaphidippus protervus*

(Walckenaer)

Metaphidippus flavipedes

(Peckham)

Metaphidippus galathea

(Walckenaer)

Maevia inclemens (Walckenaer)*Marpissa undata* (DeGeer)*Neon nelli* Packham**ANYPHAENIDAE***Aysha gracilis* (Hentz)**TETRAGNATHIDAE***Tetragnatha versicolor*

Walckenaer

Tetragnatha elongata

Walckenaer

LYSSOMANIDAE*Lyssomanes viridis* (Walckenaer)**LITERATURE CITED**

- Dennys, A. A. 1963. *Phidippus* and the wasp. Proc. Entomol. Soc. British Columbia. 60:34.
- Dorris, P. R. 1968. Spiders collected from mud-dauber nests in Mississippi. Kansas Entomol. Soc. (accepted for publication).
- Muma, M. H. 1945. Studies of the spider prey of several mud-dauber wasps. Entomol. Soc. Amer. 38:245-255.