

NATURE NOTES

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SUGARING FOR MOTHS.

The method of capturing moths by baiting with sugar is an interesting one and under proper conditions will add many new specimens to the collection.

My first experience in "sugaring" was in the summer of 1910, a year that was unusual for the abundance of insect life in general. This fact may account for the unusual success I had. At that time I lived in a small country town in Illinois. About a mile and a half from my back door was a small woodland patch not more than two square miles in area. This place consisted of low hills more or less sparsely covered with a variety of trees, such as oak, hickory, elm and walnut. A little brook bordered with all sorts of shrubbery meandered along between these hills. There were many fallen tree trunks and exposed roots which formed shelter for catocalae during the day and a note made at that time says that I flushed ten catocalae from one such shelter at one time.

For my first experiment in "sugaring" I chose the low slope of one grassy hill whereon trees were widely scattered, forming a sort of grove. For bait I used stale beer drippings into which I stirred a liberal amount of brown sugar. As my route did not lie along a path, I strung string from tree to tree so that I would be sure to find each one after dark. The bait was applied at dusk so that by the time the last tree was baited it was already dark. After about five or ten minutes wait I proceeded to make captures and the results were surely all that any one might wish for. One night I captured about seventy-five catocala in the space of about one hour. I found that after the trees had been baited for several successive nights the results were better than on the first attempts. Also hot, sultry nights when there was no moonlight gave better results. Strange to say, a visit to this region the following day failed to find any more than the usual number of catocalae, and these always as well hidden as in any other region.

To one wishing to try "sugaring" for moths I would suggest to select a place not too heavily wooded and near the edge of the

(Continued column 2.)

A STRANGE DESTROYER OF BUTTERFLIES

The paths of butterflies are beset with a multitude of pitfalls and it seems almost an impossibility that any individuals should survive long enough to accomplish the perpetuation of their kind. The relentless persecution of butterflies by birds, lizards and parasitic insects is well known. However, the observation recorded below is an example of another kind of enemy with which they have to contend, one that has not received as much attention from observers.

Near Brentwood, Missouri, on June 21, 1930, a cabbage butterfly (*Pieris rapae*) was seen in an unnatural attitude among a mass of the red flowers of *Lythrum alatum*. Closer inspection revealed that the butterfly was in the clutches of a bug, which unfortunately flew away, dropping its victim to the ground, before even its family could be ascertained. It certainly belonged to the Hemiptera, and its most interesting character was its coloration, which matched that of the flowers almost perfectly.

Such coloration, termed "anti-cryptic" by Poulton, is concealing, not for protection against an enemy, but to deceive the prey, and it educes some interesting speculations. In the first place, it implies the possession of some degree of visual perception by the victim, or such elaborate adaptation would not be necessary. Second, it shows a high development of instinct on the part of the bug that causes it to select a concealing environment in which to await its prey. This seems to indicate that the sense of sight is an important utility to the bug. Finally there is a complex relationship to be discerned in the fact that the success of the bug in procuring sustenance is dependent upon the efficacy of the flower in attracting suitable insects.

Further investigation may demonstrate that the importance of such predaceous insects in the economy of nature has not been appreciated sufficiently in the past, and here is a big field for profitable study.

- Harold I. O'Byrne.

SUGARING FOR MOTHS.

woods; a hot, moonless night, and above all, mark your path well.

- Dr. E.P. Meiners

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Stuart L. O'Byrne, Editor
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WASPS, - FIERCE TOWARDS ALIENS- WELCOME STRANGERS OF OWN SPECIES (from Science Service)

.. Wasps have a strong racial feeling. They will welcome strangers belonging to their own species, even though they come from nests many miles away. But if a strange wasp of a different species alights on the nest, it means instant battle.

This, in outline, gives the results of experiments on wasps in a number of nests which Phil A. Rau hung up in his third floor laboratory and studied in greater intimacy than most of us would want to bestow on the slim-waisted "hot-tails." Mr. Rau's data will be given in detail in a forthcoming issue of the Journal of Comparative Psychology.

Mr. Rau's collection contained three species of the genus Polistes. He found that in general if an insect of a given species were transferred to a nest of the same species it would either be welcomed by a committee of the "home folks" or, at the very least, be let tolerantly alone, to make itself at home if it chose. Sometimes a stranger wasp would become a permanent member of its host colony.

A wounded wasp introduced into a strange colony of its own species would frequently receive apparently solicitous attention from its sister-insects. They would lick its injuries and massage its body and wings.

As an extreme case, Mr. Rau pinned to one nest a dead wasp of the "right" species which had been kept for several years in a museum case in an atmosphere saturated with creosote vapor. Most of the wasps paid no attention to the mummy. A few made mildly hostile gestures and then became indifferent. But one determined female apparently had opinions of her own about the strange smelling intruder for she attacked it furiously and was not content until she had bitten off both its wings. Then she retired and treated herself to a most elaborate and lengthy toilet.

When a wasp was placed in a colony of a different species there was no friendly welcome, nor even an indifferent toleration.

Everybody was up in arms at once, and the stranger usually got very

OUR FIRST MAGNITUDE STARS.

.. In response to requests we publish a list of the first magnitude stars in order of their brilliance and showing their colors. In observing stars one should train himself to notice star colors which are an index to much of our knowledge of them.

The subject of star colors has been discussed by the Astronomy Group a number of times during the past year or two, so it will suffice to say here that if we arrange a series of stars of different colors in the sequence: red, orange, yellow, pale yellow, white and blue, we shall have them arranged in the order of their temperatures, the coolest first and hot test last. It is also true that on the average, red or orange stars will be vastly greater in dimensions than the white or blue ones. The red and orange stars will have extremely low densities, (that is the amount of matter contained in a unit of volume is small) while those of blue or white will be of average density. The densest stars do not shine very brightly and consequently are not very conspicuous, in fact none of the red dwarfs and "white-hot" dwarfs, the most dense of all, are visible to the naked eye.

The First Magnitude Stars*

	Star	Mag.	Color
1	Sirius	-1.6	white
2	Vega	0.1	white
3	Capella	0.2	yellow
4	Arcturus	0.2	orange
5	Rigel	0.3	blue
6	Procyon	0.5	pale yellow
7	Altair	0.9	white
8	Betelgeuse	0.9-1.4	red
9	Aldebaran	1.1	orange
10	Spica	1.2	blue
11	Pollux	1.2	orange
12	Antares	1.2	red
13	Fomalhaut	1.3	white
14	Deneb	1.3	white
15	Regulus	1.3	blue

..:

WASPS, - FIERCE TOWARD ALIENS- short shrift unless he were lucky enough to escape. The intruder would instantly become the center of a mass of struggling, biting sting-thrusting insects.

Their hostility was just as great against the dead body of an alien as it was against a living insect. The same mummified, creosote-flavored wasp that roused the antagonism of only a single individual in a nest of its own species produced a general riot when it was pinned on the nest of either of the other two species.

Webster Groves Nature-Study Society
A BRANCH OF THE AMERICAN NATURE-STUDY SOCIETY
(Organized in 1920)
Webster Groves, Mo.

ANNOUNCEMENTS FOR AUGUST - 1930

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NATURE NOTES

There will be TWO outings this month:

The first one will be on Saturday/Sunday August 16th and 17th, to Mrs. and Miss Schnedelbach's summer cottage near Allenton, Mo. Take Clayton Road to Ballas Road, thence to Manchester Road; from there to Allenton Road and South to Allenton, where directions will be left at Gross' Grocery Store as to route to their place, generally known in Allenton as the "Tom Evans" house.

Free from the glare of city lights is an open field for the ASTRONOMY GROUP and others interested in star study on Saturday night; while on Sunday are opportunities for your choice of field trips on favorite subjects.

Bring cots, blankets, field glasses, small telescopes, flash lights and plenty to eat, and stay at the cottage over Saturday night. Miss Schnedelbach expects to meet arrivals at the Grocery store on Saturday afternoon between 4 and 5 o'clock.

The second trip will be to Our Own Nature-Study Lodge on High Ridge Road South of Antire Road and West of Valley Park, on Saturday/Sunday August 23rd and 24th.

It will be more than worth the discomforts of a ride over the torn up Antire Road to spend a peaceful Saturday evening at the Lodge, ready for a six o'clock Sunday morning Bird Walk with the ORNITHOLOGY GROUP in charge of Mr. Walter Palmer, looking for the passing Fall migrants and other birds; - to go later in the day with Mr. Leslie Hubricht on an ICHTHYOLOGY GROUP trip and with Mr. Harold O'Byrne on an ENTOMOLOGY GROUP trip.

Bring cots, blankets, field glasses for birds and flash lights for possible cave investigations, - and enough to eat to carry over Sunday.

OTHER GROUP MEETINGS.

PHOTOGRAPHY: Monday evening August 4, 8 PM, at the Phil Rau residence, 549 East Argonne Drive, Kirkwood. Subject, "Copying Methods." Mr. David Rau, chairman.

NATURE-MELODY: Friday evening August 29, 8 PM, at the U.S. Entomological Laboratory, 527 Ivanhoe Place, Webster Groves. Subjects: "Sounds made by fishes," Mr. P.A. Vogel, and "Other midsummer melody" by other members. Mrs. Satterthwait, chairman, will be back home and in charge of the meeting.

Come, - and bring your friends.

Anne A. Jones, Secretary.