

## The Bulletin of the Webster Groves Nature Study Society.

Webster Groves, Mo.

Vol. 3 No. 6

October, 1931.

## The Ten Greatest Astronomers.

A series of short talks covering the achievements of the ten greatest Astronomers will be given at the Astronomy Group meetings during this fall and winter. The list chosen for this series will be those given by Professor F.C. Leonard, of the University of California at Los Angeles, who was asked some time ago for the names in order to have them placed on a new building. Whether all these names should be placed among the ten greatest astronomers or not, there may be some difference of opinion, but all will agree that every name on the list is that of a truly great astronomer. The list includes, Hipparchus, Ptolemy, Copernicus, Galileo, Tycho Brahe, Kepler, Newton, William Herschel, Kirchoff and Einstein. "Hipparchus and Ptolemy", is the subject for the October meeting. Besides those talks, some of the many interesting phases of astronomy will be discussed, such as "Gravitation," "The Telescope and Accessories", "Spectroscopic Astronomy," and "Motions of the Sun, Moon and Planets".

Stuart L. O'Byrne  
Chairman.

## Leap Frog.

I recall a book of nursery rhymes of years ago illustrated with pictures showing froggies at play. This seemed to me but a figment of imagination, but after watching the antics of two little frogs I am wondering whether we humans have not copied much from our animal friends.

Seated near the pond one day we were attracted by two little frogs disputing on the surface of some masses of algae.

What species they were I do not know, but they were about two inches long from head to tail and of an even yellowish color much resembling the algae around them. They seemed to be playing at leap frog, as first one would leap lengthwise over the others back, and then number two would take his turn.

After each leap they would stretch out their hind legs until they touched and then the game would continue. If they got too near the edge of the water and tumbled in they would immediately scramble out and resume their play.

Edwin P. Meiners.

## An Unusual Catch.

On July 19, a Coachwhip snake, *Masticophis f. flagellum* was taken between Bloomsdale and Festus, Mo. The species is uncommon this far north but a (cont. next column.)

specimen of the size taken might be considered an unusual catch for the reptile was lacking only an inch and a half of being six feet long. It feeds voraciously on mice and will also take dead lacertilians.

DABAHA.

## Some Unusual Butterflies.

Some Species of butterflies are abundant every year; others are common some years and scarce in others; then there are those that are always rare or uncertain in their appearance. It is interesting to try to determine the causes underlying such scarcity. Sometimes it can be traced to the activities of parasitic, prodeaceous enemies. In other cases the occurrence of the butterflies is connected with a rarity of the plants upon which the caterpillars feed. Unfavorable climatic or weather conditions may also affect the numbers of particular species of butterflies.

The following records refer to the capture of a number of such scarce butterflies during the past summer, in the neighborhood of the Lodge, and at Allenton, Mo.

Dione vanillae "The Gulf Fritillary," abundant in Texas, Florida and southern California, strays northward from its subtropical home in favorable years, and on such occasions may be seen here late in the summer. This year was marked by the capture of one at Allenton on August 9th, one at the Lodge on Aug. 18th, and a second one at the Lodge on Sept. 6th. A fourth was seen at Allenton on September 7th, but eluded capture. Information as to whether this species breeds at all in this locality would have great value. The caterpillar feeds upon the various species of Passion-Flower.

Polygonia progné "The Gray Comma", is one of the three species of angular-winged butterflies that occur here. It is characterized by a silvery "M" on the lower surface of each hind wing, the other species being marked by a semicolon and a "C", distinguishing P. interrogationis and P. comma, respectively. Progné is the scarce one of the trio, and is a northern species, common in Canada; only occasional specimens are found this far south. A specimen taken in April last year, and one on Aug. 23rd this year, both at the Lodge represent the whole of my experience with this butterfly. Other collectors report the capture of isolated specimens in other years, so I am convinced that the species breeds here. The larval food plants are currant and other Grossulaceae, and rarely elm.

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Nature Notes.

Published by the  
Webster Groves Nature Study Society.  
R.C.Lange, Editor.  
319 West Side Ave. Phone Webster 972

THE PERSEID METEORS OF 1931

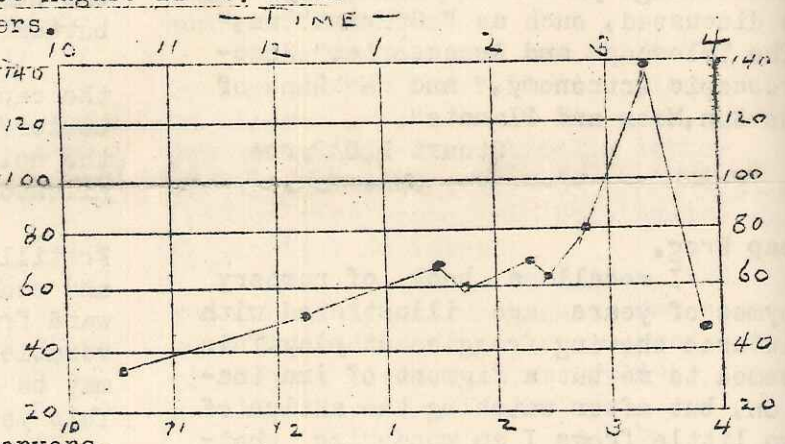
Seven observers watched the 1931 Perseid Meteors through maximum at Webster Groves, Mo., and vicinity. They observed on the nights of August 10-14 for a total of nearly sixteen and a half hours, counting 488 meteors, recording data on 115 others of which 44 were plotted on charts, and accounting altogether for 603 meteors. The records have been carefully checked and forwarded to the American Meteor Society where they will take their place among the thousands of observations received from other localities all over the world.

From the records it appears that the Perseids held true to form this year in being very swift, straight, and generally yellow in color, although some were recorded as white and others orange. In brightness they varied from the naked eye limit (sixth magnitude) to -2 magnitude (as bright as Jupiter at his brightest). Only in a few cases did they leave very marked trails and these were of rather short duration only six of the 115 recorded meteors leaving trails that lasted even as long as one second. Most of the trails lasted too short a time to estimate their duration.

On the night of August 11-12 five of the observers made a very fine series of counts lasting from 10:10 PM. until 4:00 AM. Counts such as these are valuable in determining the approximate time of maximum as well as the rate (the number of meteors per hour) for different times during the night. Table 1 is made up from these counts. Inasmuch as the data on these counts will be published elsewhere, only those data pertinent to our present discussion appear in the table. Median time is the time midway between the beginning and ending of each period of observation. The total under rate is the average of the night. The Roman numerals under "Observers" refer to the list of observers at the end of the article.

Table 1. Meteors counted and Rates August 11-12, 1931.

time	time	Total	Rate	Observers
time	time	Meteors	p.h.	
10:32	45 m	27	36.0	I
10:32	45	26	34.7	II
12:17	85	79	55.9	I
12:17	85	78	55.8	II
1:28	15	18	72.0	III
1:48	25	25	60.0	III
2:22	25	31	74.4	III
2:37	45	50	66.7	IV
2:51	31	42	81.3	III
3:21	29	67	138.5	III
3:48	25	20	48.0	III
Total	455 m	463	61.0	5 Observers.



Taking the data from table 1, we can construct a curve showing just how the rate increased during the night and fell off rather suddenly toward the dawn. This curve is reproduced herewith. The steady rise toward maximum is noticeable and that the rate took a sudden jump on toward three o'clock to reach the maximum at about 3:20. The rate decreased afterward even more rapidly than it had increased prior to that time.

While others were making counts, three observers were busy recording data on individual meteors and plotting the path of some on charts. These records made on August 11-12, the counts on the same day and August 12-13 and 14-15, together with records made on August 10-11 are all summarized in table 2. The table gives the date, total number of minutes of observation, number of meteors recorded, number of meteors accounted for, number of meteors appearing in the count, number of meteors plotted on charts and the observers who took part in obtaining each set of observation.

Table 2. Summary of all Perseids Records at Webster Groves, August 10-15 1931.

Date	Total time	Total Meteors	Counted	Recorded	Plotted	Observers
Aug. 10-11	114 m.	7	7	--	--	V
" 11-12	455	463	463	--	--	I, II, III, IV.
" 11-12	193	57	---	57	--	VI
" 11-12	84	51	---	51	44	II
" 12-13	59	17	17	--	--	VI
" 14-15	81	8	8	--	--	V
Totals	986	603	488	115	44 x	7 Observers.

x-This total is included with the 115 recorded meteors.

The Observation Committee of the Astronomy Group wishes to express their appreciation and thanks to the following observers who helped to make such a fine record of the Perseids possible. I, Miss Irmgard Schnaedelbach, II, Mr. St. L. O'Byrne, III, Mr. Carter Simpson, IV, Mr. and Mrs. A. E. Mueller, V, Mr. Wm. C. Stoecker, VI, Mr. Bert. Menke, who assisted Mr. Stoecker in each case where "VI" appears.

Stuart L. O'Byrne.

# Webster Groves Nature-Study Society

A BRANCH OF THE AMERICAN NATURE-STUDY SOCIETY

(Organized in 1920)

Webster Groves, Mo.

## ANNOUNCEMENTS FOR OCTOBER - 1931

MISS ANNE A. JONES  
Secretary-Treasurer  
690 Bonita Avenue  
Webster Groves, Mo.  
(Webster 831-J)

### GENERAL MEETING.

Friday October 2nd, 8 PM sharp, at the Rau residence, 549 East Argonne Drive, Kirkwood, "Summer Vacationing at a Naturalists' Camp"; Miss Nellie Matlock.

DR. O. W. BRANDHORST  
President

### A BIRD HIKE.

Sunday Morning October 11th. Meet at 7 o'clock at the New City Water Works for a bird hike. To get there, go out on Olive Street Road to Hog Hollow; thence to the Water Works plant. Remember - 7 o'clock sharp.

MISS NELLIE MATLOCK  
Vice-President

HAROLD I. O'BYRNE  
Vice-President

### GROUP MEETINGS.

MRS. JASPER BLACKBURN  
Flower Exchange Secretary

Photography Group - Monday October 5th, 8 PM sharp; at the Mueller residence, 12 Armin Avenue, Glendale Heights. "Photography of Insects."

DR. IRENE BLANCHARD MUELLER  
Health Secretary

Microscopy Group - Friday October 9th, 8 PM sharp; At the Mueller residence also. Subject, "Algae".

MRS. WILLIAM PICKENS  
Junior Secretary

MRS. A. F. SATTERTHWAIT  
Nature-Melody Secretary

Ichthyology Group - Monday October 12th, 8 PM sharp. At the Lange residence, 319 Westside Avenue, Webster Groves.

### GROUP CHAIRMEN

"Family Anquillidae of Order Apodes" (the eels); and "Family Catostomidae of Order Evenogathi" (the suckers).

STUART L. O'BYRNE  
Astronomy

Astronomy Group - Thursday October 15, 8 PM sharp.

MISS EDITH E. GLATFELTER  
Botany

At the Jones residence, 690 Bonita Avenue, Webster Groves.

MISS DOROTHY BOYER  
Entomology

Subjects: "Hipparchus and Ptolemy" - Miss Jones; and "Star Catalogs and Charts,- their uses",- the chairman.

MRS. ARTHUR FEAGER  
Geology

Geology Group - Friday October 16th, 8 PM sharp.

PIERRE A. VOGEL  
Ichthyology

At the U.S. Entomological Laboratory, 527 Ivanhoe Place, Webster Groves. Mr. Courtney Werner, of Washington University, will be the speaker.

DR. EDWIN P. MEINERS  
Microscopy

Botany Group - Monday October 19th, 8 PM sharp.

ARTHUR E. MUELLER  
Nature Photography

At the U.S. Entomological Laboratory also. "The Place of Polite Literature in the Study of Science. Prof. L. M. Dougan.

MISS NELLIE MATLOCK  
Ornithology

Ornithology Group - Saturday October 24th, 8 PM sharp.

R. C. LANGE  
Editor

At Dr. Brandhorst's home, 160 South Gore Avenue, Webster Groves. "Birds in Song and Poetry". Invite your friends.

NATURE NOTES

Nature-Melody Group - Monday October 26th, 8 PM sharp.

DR. EDWIN P. MEINERS  
Camp Director

Will meet at the home of its Secretary, Miss Harriet Tatman, 221 Way Avenue, Kirkwood. Sounds in the garden will be observed. Bring flashlights. If weather is unsuitable for outdoor observations there will be an indoor program.

Entomology Group - Friday October 30th, 8 PM sharp.

Meets at the U.S. Entomological Laboratory, 527 Ivanhoe Place. "Nesting Habits of Wild Bees". Mr. Phil Rau.

### JUNIOR GROUPS

The Boys of the Bristol School Group will meet Thursday October 29th and the Girls of Bristol School Group on Friday October 30th, both meetings to be in the afternoon at 72 Marshall Place. The Avery School Groups and any Field Trips will be arranged by phone.

### THE GARDEN CLUB FLOWER SHOW

This will be in the Webster Groves High School Gymnasium on Saturday October 10th and Sunday October 11th. Our Society will display a "Nature-Study" exhibit there.

Remember the dates ----

Be sure to attend ----

And - invite your friends.

Anne A. Jones, Secretary.

Some Unusual Butterflies. Cont:

Calephelis borealis," The Northern Metal Mark," is usually extremely rare, but there are on record a few cases where local colonies of considerable numbers have been found. Some have been known in our locality, but none seem to have occurred this year. A worn specimen, taken at Allenton on September 7 th, is its only occurrence this year that I know of. Because of its rarity, its early stages are entirely unknown, nor has its foodplant ever been discovered.

Feniseca tarquinius," The Wanderer," The larva of this species is our only carnivorous caterpillar. It feeds upon the woolly aphids that infest alder. Due to the weak flight of this butterfly, it is seldom found except in local spots near streams, where alder grows. It is widely distributed, however, and I have found solitary individuals in many different places. This year's record is one specimen, found imbibing moisture from the wet ground near the spring at the Lodge, on June 24 th.

Atrytone logan, this is one of the "skippers" that belong in the category of scarce butterflies. It is represented in my collection by only two specimens, one of which was captured at Allenton, this year, on September 7 th. But little seems to be known about this butterfly; Forbes states that its larval foodplant is Erianthus alopecuroides.

Hesperia leonardus, another of the "skippers" is very local in its occurrence, but in the few places where it flies, it can be found in numbers every year. I have been collecting it at Graniteville, and Old Mines, Mo., and was agreeably surprised this year to find it at Allenton. For difficulty of capture, this species deserves first prize. Alert and wary while feeding at flowers, its flight is too rapid for the eye to follow. Consequently, the greater part of the morning of September 7 th, devoted to the pursuit of leonardus, resulted in the capture of only one, -- not a very satisfying hunt, but wonderful training for the eye. Its caterpillar feeds on Grasses.

For quickness of flight, the only butterflies that approach leonardus are the "Emperors" Chlorippe celtis and C. clyton. The first is fairly common around the Lodge; clyton considerably less so. Both are difficult to catch, although they appear to be tame. They have a tantalizing habit of alighting upon one's chest, arm, or shoulder, to close for the proper wielding of the net. But at the slightest movement of their would-be captor, the butterfly disappears in a flash of gray. My bag for 1931 included several specimens of celtis, one of clyton all found at the Lodge, the clyton was taken on September 6 th. The caterpillars of both species feed on Hackberry. Cont. next column.

In these notes on the various scarce species, causes have not been emphasized. However, enough information has been given to shed light on some of the causative factors involved. In Dione vanillae there exists a tendency toward migration; this coupled with favorable weather, facilitates its northward spread. Other examples mentioned are restricted in their occurrence through peculiarities in the distribution of the larval food plants. In Nature Notes for July 1931, is an article by Dr. Meiners that deals with the relation of plants to the occurrence of butterflies. The causes of the fluctuation in numbers of some species of butterflies have not been finally determined, and further study of this phenomenon is needed.

Harold O'Byrne.

An Incident In The Life Of The Cardinal.

One day this spring I was collecting at a small open space just above the spring. Around this area were a number of cedar trees arranged somewhat in a semicircle. Just to the south was the edge of the ledge below which were numerous trees of various kinds. Somewhere from this group of trees came the song of the Cardinal and an occasional glimpse of both male and female was had. As these birds refused to be driven away by our approach, the thought came that perhaps there was a nest near by. Diligent search was made but without avail. Finally, being tired, I decided to sit on a rock and rest while the rest of my party continued their search in another direction. While thus seated, watching the butterflies coming and going, I heard a distressed cry of a Jay-bird. Clancing up quickly I saw the Jay flying away down the hill and behind him were two flashes of red. Certainly that Jay had been on a marauding expedition, thought I, and now he was getting his just dues. His sharp cries continued until he was well off in the distance. Then the cardinals reappeared. Now was my opportunity to follow them and discover their nest. At once I saw the female alight in a little cedar in front of me not more than twenty-five feet from where I was sitting. At last the secret was out. Investigating I found the nest about twelve feet from the ground with two little half naked birds therein. How much more careful is the cardinal in her nest making than the dove. A well rounded nest lined with root fibres and deeply hollowed. The youngsters had only a few tufts of down on the wings and tail, but the scarlet color of the naked skin predicted the splendor of the adult.

Ten days later the nest was empty; but search finally resulted in finding one half grown bird in a nearby shrub.

Edwin P. Meiners.

An Icebox has been added to the furnishings of the Lodge.