

*CERCYONIS PEGALA PEGALA* (SATYRIDAE): OCCURRENCE IN  
MISSISSIPPI AND VARIATION IN FOREWING MACULATION

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Only four Mississippi records, involving eight specimens, of *Cercyonis p. pegala* (Fabricius) were known to Mather and Mather (1958). Subsequent collecting has increased these numbers, so that when in 1964 Dr. J. W. Tilden indicated a wish to obtain *Cercyonis* specimens for study, a total of 27 Mississippi specimens were available and were sent to him. Based on his study of these specimens he concluded that the Mississippi population represented by them had correctly been assigned to *C. p. pegala*.

Three of the eight specimens recorded by Mather and Mather (1958) were not available for inclusion in the series studied by Tilden. Two of these were collected by H. I. O'Byrne: a female taken on 22 August 1940, at Maxie, Forrest County, and a male taken on 2 September 1940 at Gulfport, Harrison County, both are in the collection of the University of Missouri, Columbia, Mo.; the third was collected 24–25 July 1956 by John L. Daniel at Shelby State Park, Forrest County, and is in his collection. The series of 27 examined by Tilden included specimens taken on dates in July, August, and October, at localities in three counties in southern Mississippi. There were 12 males and 15 females.<sup>1</sup> Twenty (nine males and 11 females) have one eyespot in the yellow patch on the forewing upperside, seven (three males and four females) have two such spots. Data on these 27 specimens are given in Table I.

Mr. Lucien Harris, Jr., Avondale Estates, Georgia, kindly examined the 14 Georgia specimens (eight males, six females) in his collection from middle and southern Georgia that are assignable to *C. p. pegala*. The results of his examination are given in Table II.

It has been suggested in the literature that in *C. p. pegala* individuals with one eyespot on the forewing upperside are males and those with two are females. As indicated by the data in Table I, the available sample of the Mississippi population does not follow this rule. A close examination of the literature reveals that the occurrence of males with two spots and of females with one spot has been noted by Klots (1951) and by Clark and Clark (1951). Relevant quotations are given below. Holland (1931) stated that "the broad yellow submarginal band on the primaries" was "marked with a single eye-spot in the male and two eye-

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<sup>1</sup> The sex of each specimen was determined and reported by Dr. Tilden.

TABLE I.—FREQUENCY OF EYESPOTS IN YELLOW PATCH ON FOREWING  
UPPERSIDE IN MISSISSIPPI *Cercyonis pegala pegala*

Date	Locality	County	Collector	Males		Females	
				One	Two	One	Two
24 Jul. 56	Shelby State Pk.	Forrest	J. L. Daniel	2	—	—	—
25 Jul. 56	Shelby State Pk.	Forrest	J. L. Daniel	1	—	1	—
31 Jul. 60	Fontainbleau	Jackson	B. & K. Mather	1	—	—	1
31 Jul. 60	Fontainbleau	Jackson	M. & E. Roshore	—	—	—	1
31 Jul. 60	Escatawpa	Jackson	M. & E. Roshore	2	—	2	—
1 Aug. 58	Shelby State Pk.	Forrest	B. & K. Mather	1	1	4	—
1 Aug. 58	Shelby State Pk.	Forrest	M. & E. Roshore	1	1	2	1
1 Aug. 60	Shelby State Pk.	Forrest	M. & E. Roshore	1	—	—	—
1 Aug. 60	Benndale	George	B. & K. Mather	—	—	1	—
1 Aug. 60	Fontainbleau	Jackson	B. & K. Mather	—	—	1	—
2 Aug. 58	Ocean Springs	Jackson	B. & K. Mather	—	—	—	1
3 Oct. 53	Fontainbleau	Jackson	B. & K. Mather	—	1 <sup>1</sup>	—	—
Totals				9	3	11	4
					12		15

<sup>1</sup> Reported incorrectly as a female (Mather and Mather, 1958).

spots in the female." Weed (1926) wrote "... with one eye spot in middle space of the blotch on the male, and two on the female." Klots (1951) stated that it had a "tendency to reduce or lose the lower ocellus in orange FW patch." He figured (Plate 7, fig. 6) a male from North Carolina with two eyespots. Ehrlich and Ehrlich (1961) figured (Fig. 160) a Georgia female with two spots. Kimball (1965) figured (Plate I, fig. 30, 31) two Florida females both with two equally large spots. Forbes (1960) wrote "Male normally with one, female with two large blue-pupilled ocelli in the patch." He described the specimen figured by Klots (1951) as an "aberration with a second ocellus in male." Clark and Clark (1951) wrote "Throughout most of the range in the south the lower eye spot on the forewings is lacking in both sexes; in North Carolina most of the females have this eye spot more or less developed; in northern North Carolina and Virginia all the females have two eye spots and the males begin to acquire the lower eye spot; north of Virginia Beach both sexes showing both eye spots equally developed."

The population of *C. p. pegala* in southern Mississippi, judged by the data from the available sample, has two eyespots present in about one-third of the individuals and the presence or absence of a second spot is not related to the sex of the individual. Three of 12 males and four of

TABLE II.—FREQUENCY OF EYESPOTS IN YELLOW PATCH ON FOREWING  
UPPERSIDE IN GEORGIA *Cercyonis pegala pegala*

Males				Females		
One spot	Two Spots			One Spot	Two Spots	
	Equal	Lower Smaller	Lower Greatly Reduced		Equal	Lower Somewhat Reduced
5	—	1	2	—	5	1

15 females have two spots. This population is thus approaching that described by Clark and Clark (1951) as inhabiting "most of the region in the south" where "the lower eye spot on the forewings is lacking in both sexes." The population in Georgia appears much more uniformly to have one spot on males and two spots on females.

From these data it is concluded that the use of the number of eyespots on the forewing upperside as a basis for determination of sex of individuals of *C. p. pegala* is unreliable. The variation of number of these eyespots merits further study on a geographic basis. It appears incorrect to regard the male from North Carolina figured by Klots (1951) with two spots as an "aberration" as was done by Forbes (1960) since Clark and Clark (1951) had noted that in North Carolina males may have two eyespots.

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