

some other insect was responsible for the injuries to the child, the farmer insisted that he had sent the real culprit.

In October, 1928, more specimens of the same insect were received from Davis, California, with a similar claim that they were stinging children, and particularly a small infant in its crib. To make sure of the exact identification, specimens were again sent to the Bureau of Entomology and determined as the above by A. B. Gahan. By this time I was beginning to suspect that this small parasite was assuming a new rôle, but there was no way to prove or disprove the suspicions. Additional information concerning this interesting insect was received on October 16, 1930, from Frank B. Hopkins, a teacher of biology in the Esparto Union High School, Esparto, California, who wrote as follows: "I am sending a box containing a little vial in which are four or five little Hymenoptera. Will you please tell me what you think they are? They were handed to me by a lady here, who is frequently stung by them so badly they make her ill. The first time she was stung (she was alone), she went into a heart attack and nearly died. She managed to call help, however, and when the physician came he administered strychnine. She continues to keep the drug by her, but usually applies alcohol to allay the sting. The house is surrounded by large walnut and Mission fig trees. This is the only case of the kind in the community of which I can learn."

A few days later another case was reported at Woodland, California, by an attending physician, who submitted specimens to Dr. Tracy I. Storer, of the University of California at Davis, which later came into my hands for verification.

All these cases were reported from a comparatively small area in Yolo County and to date no such reports have come from any other county in California, nor have I noted similar records from any other state or country.

The evidence at hand indicates beyond doubt that *Epyris californicus* stings humans, both young and adult; that it is able to inflict considerable pain and inflammation; that its activities are at present quite restricted as to localities; and that its attacks are sporadic and uncommon. Concerning the life history and habits of this particular species, beyond its propensity for stinging, absolutely nothing is known. According to Imms,<sup>2</sup> "*Epyris* stings Tenebrionid larvae and lays a single egg on each." In California Tenebrionid beetles are abundant and perhaps furnish

in his Monograph of the North American Proctotrypidae, Bul. 45, U. S. Nat. Mus., pp. 65-66, 1893. It is now placed in the family Bethyridae, superfamily Proctotrupoidea.

<sup>2</sup> A. D. Imms, "A General Text-book of Entomology" (Dutton, N. Y., 1930), ed. 2, p. 574.

the natural food supply for this hymenopterous parasite.

E. O. ESSIG

UNIVERSITY OF CALIFORNIA

### HAMIVOROUS FISH

IN the November 20, 1931, issue of SCIENCE, Mr. C. T. Hurst directed attention (on page 515) to "a quite curious case of gastric erosion of a fish hook that had been swallowed by a fish."

Upon its appearance, I showed this fish story to Dr. Charles Reittel, the well-known ichthyophile and the author of "Let's Go Fishing." He said immediately: "Any one who fishes for pickerel as much as I do finds it quite a common experience to discover old hooks in the anatomy of this fish. Because of his sharp teeth, he often saws off the line or gut. More than once I have found trebled hooks deeply imbedded in the throat of a pickerel which, with the very slightest pressure, were crushed."

The experience of Dr. Reittel, then, confirms in general Mr. Hurst's report.

W. A. HAMOR

MELLON INSTITUTE

### RELATIONS BETWEEN FUNDAMENTAL PHYSICAL CONSTANTS

A NUMERICAL relation has been found between the fundamental physical constants shown below and the velocity of light. This relationship is of such a nature that the constants can be calculated from a single equation  $1/2\pi c = C^{12}$  and the power of the velocity of light shown, provided the decimal point is ignored. A complete solution of the relation given, enabling the decimal point to be properly placed, has not yet been found. It is, however, not possible that any merely accidental agreement could produce the numerical agreement shown below. The facts concerned will be presented in a more technical paper.

#### CALCULATION OF FUNDAMENTAL PHYSICAL CONSTANTS

		Observed	Calculated
C	C	$(2.99796 \pm 0.00004) \times 10^{10}$	2.99960
C <sup>2</sup>	m <sub>e</sub>	$(8.994 \pm 0.014) \times 10^{-28}$	8.99761
C <sup>6</sup>	1/k	$(7.294 \pm 0.0074) \times 10^{15}$	7.28415
C <sup>8</sup>	h	$(6.547 \pm 0.008) \times 10^{-27}$	6.55402
C <sup>14</sup>	e	$(4.770 \pm 0.005) \times 10^{-10}$	4.77401
C <sup>34</sup>	m <sub>p</sub>	$(1.6610 \pm 0.0017) \times 10^{-24}$	1.66014
C <sup>38</sup>	1/G	$(1.5006 \pm 0.0005) \times 10^7$	1.49373

$\pi$  = Geometrical Constant; C = Velocity of light; m<sub>e</sub> = Mass of electron; m<sub>p</sub> = Mass of proton; h = Planck's Constant; e = Electronic charge; G = Gravitation Constant; k = Boltzmann Constant.

J. E. MILLS

UNIVERSITY OF SOUTH CAROLINA

JANUARY 26, 1932