

If I might venture to point out what seems to me to be the weak point in my own view I should regard the evidence that the crossing observed in the chiasma type really takes place is by no means as yet established (see Gregoire, "La Cellule," 1910); for, while the twisting can not be doubted it is still an open question as to whether the chromosomes may untwist before the "split in one plane" appears.

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#### THE COTTON WORM

TO THE EDITOR OF SCIENCE: In connection with the correspondence of Dr. H. T. Fernald in the October 13 issue of SCIENCE on the cotton worm in Massachusetts, it may be interesting to note that there has been a very heavy migration of this insect (*Alabama argillacea* Hubn.) in the city of Pittsburgh this year. The moths began to arrive about the tenth of September and reached the maximum numbers on September 23, on which date hundreds were to be found on electric light poles and buildings in the heart of the city and passing street cars stirred up swarms from sunny places. The insects are still present (October 17) but not in very large numbers.

JOHN L. RANDALL

#### THE AIR BLADDER IN *CLUPEA HARANGUS*

IN SCIENCE (October 13, 1911) I described the air-bladder of *Ophiocephalus* and called attention to the desirability of an investigation of the condition of the posterior duct to the air-bladder in *Clupea harangus*. In this connection Dr. Gill has kindly called my attention to a lecture by Professor Huxley, published in *Nature* (April 28, 1881) in which he (Huxley) shows conclusively that *Clupea* has the posterior duct actually open to the exterior.

E. C. S.

#### QUOTATIONS

##### BENZOATE OF SODA AGAIN

THE American public believes that a question is not settled until it is settled right.

This probably accounts for the fact that the sodium benzoate question will not down. And yet, although volumes have been written on this much controverted subject, the problem itself is really a simple one. There are three basic facts on which all are agreed: First, no one denies that sodium benzoate in foods may prove harmful in certain quantities, under certain conditions or when given to certain classes of individuals. Second, no one denies that foodstuffs of a high quality can be put up without the use of sodium benzoate; in fact the best food manufacturers do not use this chemical. Third, no one denies that when this chemical is used, scrupulous cleanliness and extreme care in handling are no longer necessary. These are three incontrovertible facts, admitted grudgingly or frankly, as the case may be, by both pro- and anti-benzoate forces. Under the circumstances, then, it is not irrational to conclude that sodium benzoate should not be used as a food preservative.

And now comes from Berlin the "Expert Opinion of the Royal Scientific Deputation for Medical Affairs Regarding the Use of Benzoic Acid and its Salts for the Preservation of Food." These experts were requested by the Minister of Education and Medical Affairs in Germany to give their opinion on this subject. In their report, they first describe the chemical and physiologic action of these drugs and then briefly summarize the findings of various scientists on the question at issue. Of the decision of the United States referee board, these German scientists say:

The series of experiments in this connection made by the American scientists are of too short duration and the results coupled with certain limitations, so that they can not be regarded as demonstrating the unconditional non-injurious nature.

After considering all of the evidence on the subject the Scientific Deputation for Medical Affairs reaches the following conclusions:

In regard to the admissibility of the use of benzoic acid and its salts for the preservation of food it is mentioned that in France on the basis of a decision of the Comité consultatif d'hygiène publique of October 1, 1888, the Minister of Justice