

especially the mature spawning herring. The young herring eat more than the adults; the relative number eating is greater and also the average number of organisms eaten per herring. The food varies in the herring from the four localities investigated. It is striking that no euphausiids, important as herring food elsewhere, find a place amongst the food of the Danish herring.

The whole work shows clearly that different food is eaten in different localities and different seasons, that different-sized herrings eat different sorts of food, and that adolescent herrings eat more than the adults. Also that copepods as a whole are the most important organisms in the food of the herring from Danish waters.

This memoir embodies a very large amount of work clearly stated, and is a most valuable addition to the literature rapidly accumulating on the biology of the herring.

Genetics of 'Bar-eye' in *Drosophila*.

THE allelomorphic series of mutations in *Drosophila* known as bar-eye and ultra-bar have been much investigated owing to their variability in the number of ommatidia present. It has been shown, for example, that increasing temperature (15° C. to 31° C.) causes a decrease in the number of facets which is of an exponential or linear order; and that this rate of decrease is more rapid in bar than in full eye, and most rapid of all in ultra-bar. Flies which are heterozygous for any of these genes are intermediate in mean facet number between the corresponding homozygous parents developed at the same temperature; but they approach more nearly to one parental condition than to the other, so that one of the conditions may be considered dominant. Near 27° C. is a critical temperature at which change of dominance takes place. Others have shown that at or near this temperature, growth and rate of development both cease to be accelerated. A rise in the frequency of crossing-over in the second chromosome has also been shown to take place at about this temperature, as well as the maximum amount of muscular contraction from a certain stimulus.

These results indicate that some general protoplasmic reaction is involved. More recently, Mr. A. H. Hersh (*Jour. Exptl. Zool.*, vol. 47, No. 2) has shown that in crosses of the bar series the Mendelian dominance differs in the reciprocal crosses as well as with the temperature at which the larvæ were reared, 27° C. being a critical point. He concludes that the cytoplasm of the egg plays some part in determining the size of the eye. Unlike reciprocal hybrids have long been familiar in *Oenothera*, but very few cases have been described in animals. It is suggested that characters in general may form a series with a few at one end determined solely by the cytoplasm, many at the other end determined wholly by the nuclei, and some between, such as the bar series, determined partly by both.

In another paper (*Jour. Exptl. Zool.*, vol. 50, No. 2) Mr. Hersh has analysed further the bar series. Zeleny showed that the compound eyes of such flies have a dorsal and a ventral lobe, which also shows in flies with full oval but mosaic eyes. Such bilobing is common in Diptera and occurs in other insects. Mr. Hersh shows that in the bar series, with increasing temperature, the number of facets in the ventral lobe decreases faster than in the dorsal lobe, and suggests that the optic stalk forms the line of separation between the two lobes. It is concluded that the genes of the bar eye series produce their effects by altering the distribution of growth in the developing organism.

University and Educational Intelligence.

LONDON.—The Connaught Hall of Residence (14 Bedford Place, W.C.1), recently presented to the University by His Royal Highness the Duke of Connaught, will be ready for students of any of the colleges and 'schools' of the University at the opening of the session in October.

THE University College of Wales, Aberystwyth has established a Travelling Scholarship Fund which is used for the purpose of enabling members of the staff and students to visit foreign countries for the purpose of extending their studies. The grants made are quite small, generally £10, but are, the Council reports, greatly appreciated. Last year seven members of the staff, three past students, and forty students received such grants.

"ACCREDITED HIGHER INSTITUTIONS," a pamphlet issued as *Bulletin*, 1927, No. 41, by the United States Bureau of Education, shows that in the absence of any central controlling authority a fairly complete system for standardising educational institutions has been evolved by voluntary associations. It gives lists of institutions of higher education accepted by certain national and regional associations as meeting their standard requirements. Most of these requirements are set out in full, as are also the college, junior-college, and teacher-training college standards of the American Council on Education, which took the initiative in formulating standards for general adoption in accrediting institutions, but is not itself an accrediting agency. The other associations are: the Association of American Universities, five regional (Middle, Southern, North Central, North-Western, and New England) Associations of Colleges and Secondary Schools, the American Associations of Junior Colleges and of Teacher-Training Colleges, and a number of professional associations. Of fully accredited professional schools there are 71 medical, 26 dental, 53 pharmacy, 65 law, and 15 librarianship.

THE Council of the City and Guilds of London Institute has recently issued a report for 1927—the forty-eighth annual report since its incorporation. Of its three departments, namely, the City and Guilds (Engineering) College at South Kensington, the City and Guilds South London Technical Art School, and the Department of Technology, the first, which is the largest of the three colleges constituting the Imperial College of Science and Technology, was attended during the year by 506 students. Notwithstanding the continued depression of the engineering industries, the number of entries to the college is maintained, thanks to anticipations of a growing demand in the near future for electrical engineers. Of the 188 candidates for admission, 34 (more than twice as many as in the preceding year) came from schools outside Great Britain: 23 were from India. A very large proportion of the students, nearly 40 per cent, were scholarship holders, the total sum awarded by external authorities to students during the session being £16,346. Post-graduation classes in electrical engineering, the value of which has been recognised by industrial firms, increased notably, and 14 students were awarded the post-graduation diploma of the Imperial College. Since the formation of the Imperial College Appointments Board, 728 engineering students have been registered, of whom, so far as is known, only 17 are unemployed.