

carried from the estuary periodically with the outflowing tide. They gather at the ends of the breakwaters forming the narrow harbor mouth, and eventually, when the strength of the current has decreased sufficiently, make their way against it back into the estuary.

Two of the factors found to influence the entrance of sticklebacks into this estuary are (1) current and (2) low salinity, or something associated with it. Lyon⁵ has described the orientation of fish in a current, and states that the normal tendency for a fish is to orient itself against the direction of current flow. Sticklebacks at the mouth of the Margaree exhibited just such a behavior. If they left their position in slowly moving water at the end of the breakwater to breast faster currents emerging from the river, they were carried back out again, but if the velocity of the outflowing water was not more than $1\frac{1}{2}$ feet per second, their "cruising speed" was sufficient to take them into the harbor. At the turn of the tide, when the water became motionless, their orderly orientation was destroyed. With the commencement of the flooding tide, fish were seen to turn about and, stemming the current, make their way out of the estuary, which recalls Rutter's⁶ account of the behavior of migrating quinnat salmon in San Francisco Bay. Such actions suggest the lack of any purposeful behavior in the migration of these fish, for they might be expected to swim in and regain their natural habitat at such times when entry could be most easily accomplished.

Sticklebacks at the mouth of the estuary were found to be attracted by river water. At the end of one of the breakwaters, they were frequently subjected to a second current of water in addition to that flowing from the estuary. Depending upon the direction of the wind, this second current consisted either of salt water from outside or of fresher river water which had left the estuary a short time before. In the latter case, fish would enter it in much the same manner that they breasted the current from the river, even though it did not lead into the estuary. When it was salt water that produced the current, fish shunned it. The results of an experiment performed with sticklebacks in a trough, in which they were subjected to currents of fresh and salt water of the same temperature entering at one end, gave added support to the indication that river water is attractive to these fish. Of the three dozen individuals used in the trough experiment, there

were always twice as many fish in the current of river water as there were in the salt. *Menidia* and *Fundulus* reacted similarly. Whether the influence of the fresher water was due merely to its lower salt content or perhaps to the fact that it contained materials from the land was not determined.

HAROLD M. ROGERS

UNIVERSITY OF TORONTO

COMPOUND WORDS IN PRESENT-DAY ENGLISH

I WONDER if philologists and students of style have noticed that, at least in scientific writing, the English language is rapidly acquiring a facility in forming compound words comparable to that possessed by ancient Greek and contemporary German? Such is undoubtedly the fact. As yet, our technique is rather awkward; the elements of a compound are written as separate words, and the resultant construction, if taken literally, would often defy parsing. But its essential nature is quite clear.

The new usage seems to be wholly unpremeditated and instinctive. There is something in the air; though trained in quite different methods, I find myself unconsciously eliminating prepositions and compressing phrases into compound words.

Thirty years ago every one, probably, would have written "Department of Biology." Now half the colleges in the United States have "Biology Department," or the like, on their stationery. Certainly, thirty years ago no one would have put forth such a title as "Cost Analysis of Scholarly Periodical Printing." Then it would have read: "An Analysis of the Cost of Printing Scholarly Periodicals." In time, as we become more definitely conscious of what we are doing, it may read: "Costanalysis of Scholarlyperiodicalprinting."

The whole phenomenon may serve as an illustration of the mysterious manner in which changes in language (and some other things) take place. Learned men in any number might have argued for years that compounds were convenient, concise and generally desirable in English, and have produced no more effect than have the advocates of "reformed" spelling. But, all at once, there comes some sort of inner urge—some mental epidemic—and the thing is done.

C. A. WEATHERBY

CAMBRIDGE, MASS.

SPECIAL CORRESPONDENCE

SCIENTIFIC WORK OF THE TENTH SOKOL FESTIVAL

THE Sokol is a national movement conceived in 1862 by Dr. Miroslav Tyrš, lecturer in the history of

⁵ E. P. Lyon, *Amer. Jour. Physiol.*, 12: 149-161, 1904.

art at the Czech University in Prague, as a means of stimulating the cultural and political regeneration of the Czech people. Abroad it is recognized largely as a gymnastic organization, but behind the pageantry

⁶ C. Rutter, *Bull. U. S. Fish Com.*, 22: 65-141, 1902.