The Trade Journals As Resources for Biology Teaching

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The possibilities for better instruction offered by proper use of house organs and the publications of firms dealing with scientific supplies are many and varied. The information found therein is highly accurate, authoritative and very recent. New and fresh ideas are presented for laboratory application. Illustrations are excellent. This semester, for example, materials taken from such sources have formed an important part of daily displays labeled "Biological Briefs," placed strategically before the entrance to the classroom where they will gain ready attention and emphasize a key point in the discussion presented.

The following is a partial list of these journals received regularly from which object lessons are drawn constantly in a variety of ways for teaching purposes. The listing is alphabetical and non-discriminatory. Each one is very valuable in its own right and has more than demonstrated its worth many times.

Bird Notes, Phipps & Bird, Inc., Richmond 5, Virginia.

Most helpful in keeping one up to date concerning the latest apparatus for biological, chemical, and physical experimentation, the catchy title refers to the firm name rather than to ornithology. Much that is intriguing occurs in its pages other than the information carried. An example is the quote taken from "The Story of Rheology" by E. T. Severs of the Natvar Corporation, Woodbridge, N. J.

"Mugg parted the curtain of hair shielding his face and peered with eyes blinking to adjust from the cavernous gloom to the brilliance released in the wake of the departed rain. As he stepped into the sunshine, he first felt exhilarated as the chill of the cave melted from him. Then he felt something else. The tops of his toes, not as insensitive as the case-hardened bottoms, were cooled by mud extruded upward between his toes from the pressure of his feet. He stooped and scooped up a handful of the mud and squeezed it in his hand until it oozed between his fingers. He had done this before as countless of his ancestors had done before him, but with this difference. He felt the decreasing resistance of the kneaded mud and a faint spark of curiosity was aroused. He repeated the process, gave a satisfied grunt and winged the mud at a tree. Perhaps this is how Mugg or his like became, for a fleeting instant, the first rheologist or student of flow."

That is epic writing. Do you think your teen-ager or your college freshman would fail to get the picture of Mugg, or escape a glimpse into the depths of primitive man's dawning scientific consciousness, if this passage were read in class as an introduction to an important concept concerning viscosity and blood circulation, for instance? Wouldn't his heart pound a trifle faster with excited anticipation, that is, if he had any imagination whatever? And some do, thanks be. The article continues with an arresting account of the history of flow beginning with the Egyptian Amenemhet of about 1540 B.C. and ending with Poiseuille who traced facts concerning human circulation.

Carolina Tips, Carolina Biological Supply Co., Elon College, N. C.

The December 1956 issue has an index for the year from which a few titles are given to show the possibilities of the articles as teaching aids: Artificial Stimulation of the Egg-laying Response in Frogs; Setting up an Aquarium; Aspirator for Use in Fixing Plant Tissues; Development of Mealworms; Fern Sperms; Preparation of Herbarium Specimens; Laboratory Exercises in Genetics; More Animal Facts and Myths; Mosquito Culture: This same issue has a description of *Pandorina* with a life

cycle diagram accompanying, by Dolores Bejewski of Mundelein College, Chicago. Be sure to request this publication. It's good.

Clinical Symposia, Ciba Pharmaceutical Products, Inc., Summit, N. J.

A journal, published mainly in the interests of the medical profession but first class for any biologist, which appears once every two months and always welcome. It invariably contains authoritative articles featuring diseases. The illustrations are many and fine. The Nov.-Dec. '56 issue is devoted particularly to the timely subject of cirrhosis and is highly graphic.

Cenco News Chats, Central Scientific Co., 1700 Park Road, Chicago 13, Ill.

The biographies of some of the great men in modern science are featured regularly. Number 83 for 1956 tells of the admirable life and work of Dr. E. J. Cohn, outstanding investigator of blood chemistry at Harvard for many years.

Digest of Biology and *General Science*, W. M. Welch Scientific Co., 115 Sedgwick St., Chicago 10, Ill.

Excellent digests of important articles, prepared by Dr. Richard R. Armacost, co-editor of the *American Biology Teacher*, provide a great many suggestions for the enterprising science and biology instructor, as well as hours of instruction and worthwhile enjoyment in accessible form.

The Educational Focus, Bausch and Lomb Optical Co., Rochester 2, N. Y.

Anyone who has experienced the sparkling and often subtle humor tucked away in the technical but absorbing articles of Dr. David Causey on parasites and their kin which appear from time to time in this periodical needs no further recommendation for keeping the copies close by for consultation with the inevitable chuckles, or even guffaws, they arouse. Every issue has many items of value centered around the microscope and its uses.

Laboratory, Schaar and Co., 754 W. Lexington St., Chicago 7, Ill.

Although much included here relates to chemistry there is challenge for the biologist as well. The "Accidental Scientific Discoveries" featured have proved enlightening and absorbing. The smear technique as developed by John Belling in chromosomal studies of crushed anthers was particularly appealing.

Pfizer *Antibiotics News Letter*, Pfizer Laboratories, Brooklyn 6, N. Y.

This is devoted to reporting up to the minute research on antibiotics. The special issue, covering the fourth annual symposium held in Washington, D. C., October 1956, was especially complete and instructive.

Progress through Research, General Mills, Inc., Research Laboratories, 2010 E. Hennepin Ave., Minneapolis 13, Minn.

A quarterly of great interest to anyone having to deal with foods. The article on "Food Irradiation" by Drs. Henry and Andrews, Vol. 10 for 1956, with its excellent illustrations and graphs, is but one sample of the fine articles encountered.

Research Today, Eli Lilly Research Laboratories, Indianapolis 6, Ind.

Every issue is a gem in medical knowledge of the latest kind. The issue of Vol. XII, No. 1, 1956, on "Experimental Cancer Research" is superb in every respect. A fine bibliography accompanies each article. A list of current research papers is in each issue, many being free for asking.

The Sugar Molecule, Sugar Research Foundation, Inc., 52 Wall St., New York 5, N. Y.

This specializes on sugars and other carbohydrates with their many uses.

"Combating Food Misinformation" is a representative title from Vol. 10, No. 1, for the summer of 1956. Excellent articles, very well written.

Therapeutic Notes, Parke, Davis & Co., Detroit 32, Mich.

It matches any of the medical trade journals in accurate and relevant facts, in variety of appeal and quality of production. The "Famous Firsts" which appear regularly have dealt with the hearing aid, percussion hammer, rubber gloves, silver suture, operating table, scalpel, colorimeter, and those instruments so indispensable to medical practice. Books are reviewed, "10 second abstracts" on medical news items occur, with every copy full of interest.

Turtox News, General Biological Supply House, Inc., 8200 So. Hoyne Ave., Chicago 20, Ill.

If you are one of the 50,000 biologists who receive this treasured organ monthly you need no statement of its worth. A wide spread of articles appears in its pages. It offers an excellent medium, courteously and generously, for reports on much investigation which probably would not otherwise get into print.

Ward's *Natural Science Bulletin*, Ward's Natural Science Establishment, Inc., Rochester 9, N. Y.

Long a leader in supplying high quality materials to biology and geology laboratories this company is well and favorably known for its "Bulletin" and separately published "News Letter." The autumn issue carries a firsthand account of dogfishing operations on the Maine coast, a timely recital which could not help but create pleasant recollections in the minds of sea-goers, especially natives of the rugged Pine Tree State.

If you are a biology teacher at any level, you will find many items of usefulness in each of the house organs listed. Why not write to one or more of the parent companies asking that your name be added to their mailing list? If your experience is as expected you will receive cordial compliance with an outcome most rewarding to yourself and your students.

Dialogue on the Neuro-Muscular Mechanism

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Characters:

Chordata ..... Chor.
Arthropoda ..... Arth.
Mollusca ..... Moll.
Annelida ..... Anne.
Platyhelminthes ..... Plat.
Coelenterata ..... Coel.
Porifera ..... Pori.

Chor: Ouch! There it goes again—our daily torture.

Pori: What are you all jumping around about? I don't feel anything.

Chor: That's just because you have no nerves to feel the electric shock the experimenter is putting through this pool. You couldn't jump anyway, because you have no muscles to jump with!

Pori: Maybe I can't feel things, as I don't have any nerves, but you're way off when you say I can't move. I have a perfectly good muscle around my mouth. Just put your fin in it, and I'll show you whether I can move or not.

Chor: All right; so if something hits it, your muscle will contract, but you can't just make it contract. Now with me, I have nerves and muscles all over my body, so I'm really suffering.

Coel: What are you griping about, Chor.? At least if half of you is out of the water, only the half that's in will feel the shock, since your brain is a central meeting place where all your pains report and get sorted out. Even if a mere fraction of one of my tentacles is in the water, I feel it all over my body.

Chor: I really pity you poor, lowly creatures. To have every sensation diffused over your entire body must be confusing. When someone sticks a pin in you, how do you know where you've been stuck, and which part of you to withdraw?

Coel: I don't. That's the trouble. It's because we have this silly diffuse nervous system. Our nerves connect directly with the muscle they stimulate as well as with other nerves; and, since impulses may travel in any direction in our nerves, each nerve passes the sensation on to the next which stimulates its muscle and passes it on again. Thus may whole body is thrown into turmoil by one pin prick.