fish for fish fanciers, baby chicks and chickens, frozen fresh fish, which require periodical icing and much attention, have continued to benefit from reduced, and even second-class, rates.

Business is seriously hurt by these unwarranted charges, since we often have to use Railway Express to get live materials from collecting stations on the long Florida Peninsula to the laboratory for processing, with the result that we incur the same high transportation charges twice. Commonly, the transportation costs are considerably in excess of the invoice value of the materials.

Our experiences with air freight were uneconomical and disastrous. In this service delivery dates could not be planned, because most of the flights are unscheduled and are completely suspended on Saturdays and Sundays, thus reducing the work week in collecting and in the laboratory to three days. Besides, a total air freight embargo on any live materials has eliminated Eastern Airlines, which operates the only route directly north, with connecting flights to the west. As a consequence air freight shipments are transported over a grand detour—e.g., from Tampa to Jacksonville to New York, to reach Chicago, and from Chicago by Railway Express to Champaign, Ill. The charges for this service are, of course, on a mileage basis. One shipment that we entrusted to the "fast service" by air freight took *7 days* to make this distance, and the animals arrived dead of dehydration and malnutrition. We replaced them by private plane and delivered the animals in Chicago within *6 hours*. Larger animals requiring feeding and watering have been shipped exclusively by Railway Express after this experience.

This account of transportation problems in the supply of live materials shows that immediate relief is a necessity.

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Book Reviews

Medicinal Chemistry: Chemistry, Biochemistry, Therapeutic and Pharmacological Action of Natural and Synthetic Drugs, Vol. II. Alfred Burger. New York–London: Interscience, 1951. 506 pp. $10.00.

The first volume of this two-volume text was reviewed in a previous issue (SCIENCE, **114**, 559 [1951]). In this second volume Burger has maintained the same admirable style and organization. Although there is an excellent chapter on the hormones, the book is chiefly concerned with the chemotherapy of diseases caused by pathogens. A chapter of especial merit is the one dealing with the theories of metabolite antagonism.

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The Barker Index of Crystals, Vol. I: ***Crystals of the Tetragonal, Hexagonal, Trigonal and Orthorhombic Systems,*** Part 1: Introduction and Tables; Part 2: Crystal Descriptions. M. W. Porter and R. C. Spiller. Cambridge, Eng.: Heffer, 1952. Part 1, 250 pp., 30s; Part 2, 1027 pp., £4 10s; £6 for both.

The first 120 pages of Part 1 of this giant reference book deal primarily with an introduction to the Barker Index. They give a highly condensed summary of elementary crystallography and of the important types of crystallographic projections—all from the standpoint of an amateur worker in such fields. This is followed by a short description of the Barker protractor and a short discussion of its five scales. This leads to a discussion of the multiple tangent table, followed by a worked-out "identification of an unknown crystal." Detailed consideration is given to symmetry determination, projection, setting and orientation, and the calculation of the classification angles, for the crystal systems: cubic, orthorhombic, tetragonal, hexagonal, and trigonal.

The Barker Index deals with data obtained from single crystals, not with data obtained from powdered crystals, as is the case with the "ASTM, Hanawalt," method of chemical identification. The Barker Index, therefore, requires a pretty accurate knowledge of the orientation of the single crystal with respect to some base line taken from the x-ray diffraction equipment. This has required the assembly, mainly from existing literature, of large quantities of "single crystal" data. These data have been arranged in three tables, as follows: Classification angles for tetragonal, hexagonal, and orthorhombic crystals. Other data, useful in confirming conclusions reached by other methods are tabulated as follows: (1) refractive indices for tetragonal, hexagonal, trigonal, and orthorhombic crystals; (2) densities of tetragonal, hexagonal, trigonal, and orthorhombic crystals; (3) melting points of tetragonal, hexagonal, trigonal, and orthorhombic crystals.

The last half of Part 1 includes two additional tabulations—an alphabetical list of English chemical and mineralogical names, and an alphabetical list of German chemical names as used by Groth. None of the tabulations of classifications angles is made with reference to page numbers. Instead they are tabulated with reference to known quantities, such as Cr, Am, and Bq, which appear systematically in crystallographic calculations.