even after his own experiments had made it untenable. Not convinced by the brilliant researches of Lavoisier, Priestley remarked, " I have well considered all that my opponents have advanced, and I feel perfectly confident of the ground I stand upon. . . . Though nearly alone I am under no apprehension of defeat."

Compare these unfortunate incidents with the honourable solution of the question of priority in the recognition of natural selection as an agent bringing about evolutionary changes. Lyell and Hooker sent to the Secretary of the Linnaean Society the following letter, referring to Darwin and Wallace : " These gentlemen having, independently and unknown to one another, conceived the same very ingenious theory to account for the appearance and perpetuation of varieties and of specific forms on our planet, may both fairly claim the merit of being original thinkers in this important line of enquiry ; but neither of them having published their views, though Mr Darwin has for many years past been repeatedly urged by us to do so, and both authors having unreservedly placed their papers in our hands, we think it would best promote the interests of science that a selection of them should be laid before the Linnaean Society."

Again, Pasteur, having shown that optically active organic compounds rotate the plane of polarised light even when in solution, drew the bold, and, as it turned out, correct conclusion that the molecules of such compounds are themselves asymmetrical. This led him into conflict with Biot, who was not without doubts regarding the accuracy of Pasteur's observations. Biot called Pasteur before the Academy, handed to him some racemic tartaric acid, soda and ammonia, and bade him repeat the experiments. The crystals prepared, Biot himself made the solutions and examined them in the polarising apparatus. Then, in Pasteur's own words, " Without even making a measurement, he saw by the appearance of the tints of the two images, ordinary and extraordinary, that there was a strong deviation to the left. Then, very visibly affected, the illustrious old man took me by the arm and said, ' My dear child, I have loved science so much all my life that this makes my heart throb.' "

All things considered, *Rh-Hr Blood Types* is at once an example and a cautionary tale. The example appears in the speed and deftness with which a seemingly trivial observation (that a rabbit antiserum against monkey red cells agglutinates some but not all human cells) was exploited in the brilliant serological discoveries concerning transfusion reactions and *erythroblastosis fœtalis*. The other side appears in Wiener's reluctance to recognise the profound significance of the work of others in the field which he has come to regard as his own preserve. There are no monopolies in science.

ANTHONY ALLISON.

AN Rh-Hr SYLLABUS. The Types and Their Applications. By Alexander S. Wiener, M.D., F.A.C.P., F.C.A.P. New York : Grune and Stratton. 1954. Pp. 82. $3.75.

The purpose of this booklet is to present an up-to-date summary of the Rh groups and their applications to clinical and forensic medicine and anthropology in a compact, easily understandable form. It is intended as an introduction : " for readers not specialising in the field, it contains all the information they require and will make it possible for them to read and understand without difficulty current articles on the subject,

no matter how complex." The material has been arranged in the form of a well-organised glossary, which makes for easy reading. In general, the presentation is clear and sound. It is at times perhaps unnecessarily dogmatic : thus, there are some who would take exception to Wiener's statement, " Reports that pregnancies even with Rh-negative babies may cause a non-specific anamnestic rise in titer (of Rh antibodies) are erroneous." The term " conglutination " is retained for the albumin agglutination technique in spite of the fact that conglutination has long been used in quite another sense in serology.

The booklet is marred by the trumpet blasts which are sounded *fortissimo* against the CDEF notation and theory of linked factors. None the less, the theory and the notation, unlike the walls of ancient Jericho, still stand, and they are of great value to the student who is being initiated into the problems presented by the Rh groups. In any case, a proper understanding of the CDEF terminology is necessary for the interpretation of current papers on the subject. ANTHONY ALLISON.

ANIMAL SPECIES AND THEIR EVOLUTION. By A. J. Cain. London : Hutchinson's University Library. 1954. Pp. 190. 8s. 6d.

Until about two generations ago, systematics and descriptive morphology were predominant in biological research and in academic curricula. Owing to the spectacular development of experimental biology, the pendulum of popularity has swung far away from systematics. At least in the United States, theses based on research in systematics are not regarded in many universities as satisfying the requirements for the doctor degree. Some of the major foundations show a disinclination to support research in systematics, while being very generous to other branches of biology. Since the war, however, signs are multiplying which suggest that the anti-systematics bias is also passing. The current of the so-called " new systematics " has definitely gathered strength, and systematics seems to become once more integrated with other biological disciplines in a broad synthesis which is now emerging in modern biology. Perhaps this re-integration is being brought about not so much by new systematics as by new systematists, who combine a wide knowledge of the variety of living things with an insight into the problems of general biology and a thorough understanding of the scientific method. Dr A. J. Cain is one of these new systematists, and his compact but forceful book should be equally useful to systematists and to other biologists as a prophylactic against mutual prejudice and short-sightedness.

Dr Cain has devoted the first five chapters of his book to a brief exposition of the scope and of the working methods of taxonomy. The presentation is concise and admirably clear. The illustrative examples are well chosen to elucidate the ideas discussed, although these examples often deal with animals which inhabit remote lands and which will be rather unfamiliar to a majority of the probable readers. The sixth (" The Biological Species ") and the eighth (" Geographical Speciation ") chapters are perhaps the most important, and also the best written, in the book. The last chapter (" Sympatric Speciation ") deals with some more specialised topics.

The species of classical taxonomy are morphological species, or " morpho-species " according to Cain. Morphospecies are defined entirely on morphological characters ; some taxonomists still persist in refusing to