about 3.5 mm. long, near the base, and only about 5 mm. of their tarsi black.

Type in the collection of Dr. C. P. Alexander who confirms the species as new, and cites the following as the closest allied: *T. pedata* Wied., *T. fuscitarsis* Edw., *T. tinctipes* Edw., *T. micrantha* Alex., *T. scimitar* Alex., *T. venusta* Walk. From all of these it differs in the combination of leg pattern and coloration of body and wings.

BOOK NOTICES

A HANDBOOK OF THE DRAGONFLIES OF NORTH AMERICA. By J. G. Needham and H. B. Heywood. vi + 368 pp., with many figures and diagrams. Charles Thomas, Springfield, Illinois. \$7.00.

The scattered literature relating to North American Odonata has been gathered together, digested and presented with a large amount of new material in the present book. The introduction of about fifty pages includes a short account of structure and habits and the remainder is a very complete taxonomic treatment, including keys, of the adults and nymphs so far as the latter are known. This is a "handbook" in the full sense of the word, and with its list of literature should serve as a complete guide to the field with which it deals.

C. T. BRUES.

THE PROBLEMS OF APPLIED ENTOMOLOGY. By R. A. Wardle. vii + 587 pp., 31 figures. McGraw-Hill Book Co., New York. \$6.00.

After the extensive series of text books on insects that have been published during the past few decades, it would seem that no actually new and unique treatment of any extensive entomological field could be expected. Professor Wardle has shown that such is not the case, and has worked

into a consistent treatment a vast amount of general and specific material relating to practically every phase of applied entomology without following any of the usual methods of procedure. The first ten chapters relate to general problems and deal with such diverse topics as "climatic resistance" "tropic behavior" and "stomach poisons". These serve to show the present extent of the fields invaded by the economic entomologist and the methods which he applies in his work. The more specific portion, entitled "Area Problems" deals with the problems that confront the entomologist in particular parts of the world and includes a discussion of the multitude of insects that have forced themselves upon the attention of agriculturists, foresters and medical men in all countries. A discussion of this sort has never before been attempted on so broad a scale. A very extensive and well arranged bibliography completes the book.

Professional entomologists will find this book extremely valuable and for all others interested in the problems with which it deals, it will be a useful compendium.

C. T. BRUES.