sure to come to appreciate) the work and writings of Sir
Vincent B. Wigglesworth, will find this volume of essays
written in tribute to V. B. Wigglesworth by 23 of his past
and present students and research associates on his
retirement from the Quick Chair of Biology
and the Directorship of the Unit of Insect Physiology
in the University of Cambridge, it is a fitting recognition of
his pioneering leadership and also a challenging verifica-
tion of the theme of his 1948 Croonian Lecture: "Insects
... are so varied in form, so rich in species, and adapted
to such diverse conditions of life that they afford un-
rivaled opportunities for physiological study."

The major topic headings, under which the 23 contrib-
uted essays are presented (authors for each are shown in
parentheses), familiarly include: The Integument (J.
Noble-Nebitt, W. A. L. David), Morphogenesis (M.
Lüsch, P. A. Lawrence, M. Locke, A. N. Clements,
A. D. Lees, Neurocrystal (S. H. F. Madrell, W. J.
A. Novak, C. M. Williams), Flight (T. Weis-Fogh),
The Central Nervous System (J. S. Edwards, J. E.
Trehern, D. S. Smith), Pharmacology (E. H. Coulhoun),
Sensory Physiology (E. T. Burt, E. H. Sihler), Behavior
(J. S. Kennedy, P. L. Miller), Permeability (J. W.
Beament, T. O. Browning, M. J. Burridge), and Repro-
duction (K. G. Davey). The extent of these topics indi-
cates the great range of work which was stimulated under
Professor Wigglesworth's guidance in the Cambridge
Sub-Department of Entomology and they are ap-
propriately arranged in the volume along the general
format adopted in his "The Principles of Insect Physi-
ology."

The volume has been expertly printed and edited and
includes many excellent glossy plates and printed figures.
References to the literature, including titles, are listed
alphabetically by author at the end of each essay. Subject
and author indices are provided. However, the minimal
nature of the former decreases the volume's usefulness as
a reference text.

Although the individual contributions vary, as is to be
expected, in scope and style (and perhaps specific readers'
interests) they are typically more than just reviews of
recent advances. Most incorporate new and previously
unpublished material and, even more importantly, present
critical analyses of their particular areas in relation to
insects specifically as well as physiology generally.
Remarkably resembling V. B. W.'s own writings, the spirit
and enthusiasm of this collective volume are catching.
The essays are not only a fitting tribute to the pioneering
nature and breadth of Professor Wigglesworth's contribu-
tions, but the collection is a worthy and useful adden-
dum to his writings and particularly to "The Principles
of Insect Physiology." No one (student, instructor, or
researcher) with an interest in insect physiology can
afford to be unfamiliar with it. Anyone with an interest
in insects is sure to find something stimulating in it.

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CONTROL OF LIVESTOCK INSECT PESTS BY THE STERILE-
MALE TECHNIQUE. Proceedings of a Panel Organized
by the Point FAO/IAEA Division of Atomic Energy
in Food and Agriculture and held in Vienna 23-27

Included are some interesting reports of preliminary
studies on the sterilization and the possible application
of the sterile-male technique toward control of Dermatobia
hominis (Linnaeus, Jr.) and other livestock pests in
Mexico, Central America, and the United States.
The current status of the screw-worm eradication program
in the southwestern United States also is discussed in some
detail. However, the unique contribution of this publica-
tion is the in-depth appraisal, by many recognized author-
ities on tsetse flies, of the sterile-male technique as ap-
plied to control of this pest. Not only is the potential of
the technique discussed, but such pertinent topics as sterili-
zation by gamma irradiation and chemicals, as well as
investigations on the rearing, distribution, genetics, physi-
ology, and ecology of this insect are described in detail.
The panel concludes the proceedings by listing several
recommendations that could well serve as guidelines in
establishing studies using the sterile-male technique not
only as it concerns livestock pests but also against any
arthropods where use of the technique is contemplated. It
is a significant preliminary report in a field where, except
for screw-worm research, little has been summated.

It is regrettable that seven of the papers were published
in the language in which they were presented at the meet-
ing and will necessitate translation by many where such a
service is not available.

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HANDBOOK OF PEST CONTROL, Fifth Edition by Arnold
Mallis, 1969. MacNair-Dorland Company, 101 West
31st Street, New York, N. Y., 1158 pages.

Once again, the author has performed the valuable serv-
ice of updating this popular reference to pest control.
All who keep a copy of this comprehensive guide to practical
pest control handy for frequent referral will find that the
changes and additions between the fourth edition (1964)
and the new text are not extensive but consist of small
improvements that result in additional convenience to the
reader. The pictorial keys which provide easy identifica-
tion of the common pest species have been expanded from
fifteen to nineteen plates to include two new keys for
identifying cockroach egg cases and larvae of dermestids,
and two additional plates on rodenticide characteristics
and types of chemical control. The keys have also been
moved to the appropriate part of the text rather than
grouped in the back of the text. A few well chosen photo-
graphs and drawings have also been added to give addi-
tional visual value to the twenty six chapters that now
contain two hundred fifty illustrations. An additional
chapter was provided by the separate discussion of mos-
quitos which had previously been included in the chapter
on flies and gnats.

Those of you who have yet to make this handbook one
of your most consulted references will find an amazing
amount of easy-to-read authoritative and well organized
information. The essential identification, biology and con-
trol of the household pests normally associated with man
are discussed and illustrated so clearly that the reader
will be considerably aided in understanding the nature
and effect of his pest control problem.

If there is any area where expectations were not fully
realized, Chapter XXV, "Chemicals Used in Controlling
Household Pests," would be selected. The content was
essentially the same as that in the 1964 edition, although
considerable change in concepts of pest control have
occurred during the past five years. While a guideline to
the resolution over continued use of persistent pesticides
should not be expected at this time, some reflection of the
change in emphasis would have been a welcome addition
to this key chapter.

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