

## SHORT SCIENTIFIC NOTES

### Some Newer Cyanoethylated Cyanoacetanilides, Malonanilides and Ethyl Malonates as Possible Insecticides

Different cyanoethylated compounds have been shown to exhibit biological activity<sup>1,2</sup>. Twentytwo substituted  $\alpha$ -cyano,  $\alpha$ ,  $\alpha$ -bis-( $\beta$ -cyanoethyl)-malondianilides,  $\alpha$ ,  $\alpha$ -bis-( $\beta$ -cyanoethyl) malonanilates and  $\alpha$ ,  $\alpha$ -bis-( $\beta$ -cyanoethyl) acetanilides have been prepared and were found to possess sufficient insecticidal activity. The activity of these compounds was compared with D.D.T., B.H.C. and pyrethrum.

The maximum insecticidal activity was observed with  $\alpha$ ,  $\alpha$ -bis-( $\beta$ -cyanoethyl) 3, 3'-dichloromalon-dianilide. It seems that the nucleophilic groups decreased the activity and electrophilic groups increased the insecticidal activity  $\alpha$ ,  $\alpha$ -bis-( $\beta$ -cyanoethyl) malonanilate derivatives were found to possess considerable activity. Maximum activity was observed with  $\alpha$ ,  $\alpha$ -bis-( $\beta$ -cyanoethyl)-malon-4-chloranilate (about 70% as compared to DDT or BHC).

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### Components of *Cestrum nocturnum*

*Cestrum nocturnum* Linn. (Solanaceae) (night queen) is grown as an ornamental plant all over India<sup>1</sup>. This was studied earlier for its chemical constituents<sup>2,3</sup>. The present work records for the first time the isolation of ursolic acid,  $\beta$ -sitosterol- $\beta$ -D-glucoside and pseudoyuccagenin.

Shade-dried leaves were extracted with hot ethanol (95%) under reflux. The aqueous concentrate was repeatedly shaken with *n*-hexane, ether and ethyl acetate in succession. The hexane washings on column chromatography over neutral alumina yielded a low melting solid, m.p. 85°; the fractions from the chloroform eluate gave colourless crystals, m.p. 280–81°,  $[\alpha]_D^{25} + 68^\circ$  (py). M.F.  $C_{30}H_{48}O_3$ . It gave colour reactions characteristic of a triterpenoid. On acetylation with  $Ac_2O$  and pyridine, it formed an acetate, m.p. 279–81°

and a methyl ester, m.p. 168–69° on treatment with  $CH_2N_2$ . It was identified as ursolic acid by direct comparison with authentic samples of the compound and its derivatives by m.m.p. and co-TLC.

The ether-soluble fraction also yielded some more ursolic acid when chromatographed over silica gel. Elution with chloroform : methanol (9 : 1) yielded  $\beta$ -sitosterol- $\beta$ -D-glucoside, m.p. 284–85° (a), giving all characteristic colour reactions; it formed a tetra-acetate, m.p. 170° and gave  $\beta$ -sitosterol, m.p. 129–31° and D-glucose on acid hydrolysis. The identity of the glucoside was further confirmed by a direct comparison.

The mother liquor left after extraction was combined and mixed with ammonium hydroxide and kept overnight. Repeated purification of the precipitated solid gave a crystalline compound m.p. 192° (d). This was identified as pseudoyuccagenin by converting it to yuccagenin, m.p. 239–40° C, by heating it with 2% alcoholic  $HCl$ <sup>2</sup>.

Ursolic acid was reported to be present in *Cestrum diurnum*<sup>4</sup>. It is now isolated in a better yield (0.4%) from a sister species, *C. nocturnum*.

We are thankful to the Principal and Prof. M. N. Ghosh of our Institute for encouragement.

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### Observations on the Leptophragma of *Chrysochroa* (Buprestidae)

Saini (1964) described the leptophragmata in cryptonephric beetles and mentioned that all cryptonephric beetles, except Anobiids, Ptinids and Melolontha, are leptophragmic. However, Buprestid beetles were not described. Poll (1932 a, b)

described the Malpighian tubules of Buprestid beetles and mentioned that the cell of leptophragma is absent in this group. In the present observations, different Buprestids like *Sternocera* and *Chrysochroa* have been observed and it has been found that the cell forming leptophragma which has been described earlier by Saini in other cryptonephric Coleptera is also present in Buprestid beetles. The cell is similar to the flat leptophragma cell which has been described in Chrysomelidae.

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## REVIEWS AND NOTICES OF BOOKS

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**Information Sources in Science and Technology.**  
By C. C. Parker and R. V. Turley. (Butterworths, London), 1975, Pp. 223. Price £ 5.50.

Few of the "broad survey" books on Information Sources that are now flooding the market focus with clarity, thoroughness and wide scope as does the present one under review. The book consists nine chapters on various topics like, defining the problem, choosing sources of information and their guides, literature searching, obtaining literature in usable form, evaluating and storing information, communicating information, current awareness, etc., which are of interest to practising scientists in their fields of interest.

In the preface, the authors write "there is nothing new about most of the factual information contained in these pages. However, we do claim that there is a certain novelty about its presentation, and therein lies our justification for producing yet another contribution to the literature explosion. We have tried to make this book easy to use by arranging its contents in a logically structured fashion, with more or less self-contained sections. This is no more than an introductory guide; nor is it in any sense 'Complete'. We must emphasise that we have produced only a "selection"; Comprehensiveness is not to be looked for in a book of this size". Judged by this statement, the authors have covered all the important literature we are aware of and much that we have not read.

Everyone with access to this book will have at his finger tips a wealth of factual information covering an immensely far-reaching selection of information sources and their guides. All data are presented in a straight-forward and easy to use format. The book is unrivalled in its exceptionally

clear presentation, its comprehensive charts; its extensive references which direct the reader instantly to his relevant sources, and its coverage of sources outside the literature.

Books about reference sources must be up-dated to retain their value. The authors have added several new sources in this look. Of special interest is the inclusion of a few general interest, computer based, current awareness and Information Retrieval Sources.

We not only recommend this book for all practising scientists and Engineers, especially students of these subjects but we feel that it will serve as a source book to all Librarians and Information Officers, particularly those working in a scientific and industrial environment.

For all practical purposes, this should be a one sentence review: BUY THIS BOOK. Having said this, there is little more to say.

The printing and the get-up of the book are good and in keeping with the traditions of the Publishers. The Reviewers however feel that greater care should have been taken in dealing with the proofs, since a few typographical errors have escaped attention. Eg: In the "Preface", at the end of the first paragraph, the last line which reads "and even Library School Students might derive some benefit from its approach (though this book is not expressly written for them)", does not make full meaning of the sentence.

The weakest feature of the book is its astonishingly high price, which will probably limit its purchase to a small number of libraries and specialists.

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