

# ISRAEL JOURNAL OF ENTOMOLOGY



VOLUME IV(2)1969

THE ENTOMOLOGICAL SOCIETY  
OF ISRAEL

The beetle on the front page: Capnodis carbonaria Klug (Buprestidae). Though its distribution is limited to the Balcans, Asia minor, Syria and Palestine, it is there one of the most destructive borers in stone fruit trees. It is pictured here in honour of Prof. E. Rivnay, to remember his important investigations (1944-1951) on the bionomics control of this pest.

#### MANUSCRIPT

Manuscripts should not exceed 20 typewritten pages; in case of larger manuscripts the author is requested to contact the editor first.

Manuscripts should be submitted in two copies (text and tables only), to be typewritten, doublespaced and on one side only; Latin names should be underlined.

An abstract of not more than 20 lines should precede the text. Transcription of Hebrew names should be in accordance with the names of localities in the Map of Israel 1:250000 ("Survey of Israel" 1962); other names according to the Oxford Dictionary. Names of insecticides should be written exactly as in "The Nomenclature of chemicals used in pest control", published every year in the "Review of applied Entomology".

The Bibliography should be placed at the end of the manuscript, the authors arranged in alphabetical order, quoting either: author, year and journal only, or: giving also the complete title, but in every paper, references must be uniform. Abbreviations according to the "World list of scientific publications" (Butterworths Scientific Publications, London).

Illustrations, graphs and tables should be sent ready for direct reproduction and their place in the text indicated at the margin of the page of the manuscript. Photographs (half-tone reproductions) will be given in original or reduced size, but never be enlarged. Line drawings and graphs should be drawn in India ink and also the lettering within the drawing should be final and drawn with India ink. Illustrations mounted on plates should be arranged finally and lettered.

Explanation of all figures, graphs, tables and plates should be typed on a separate sheet.

#### PROOFS

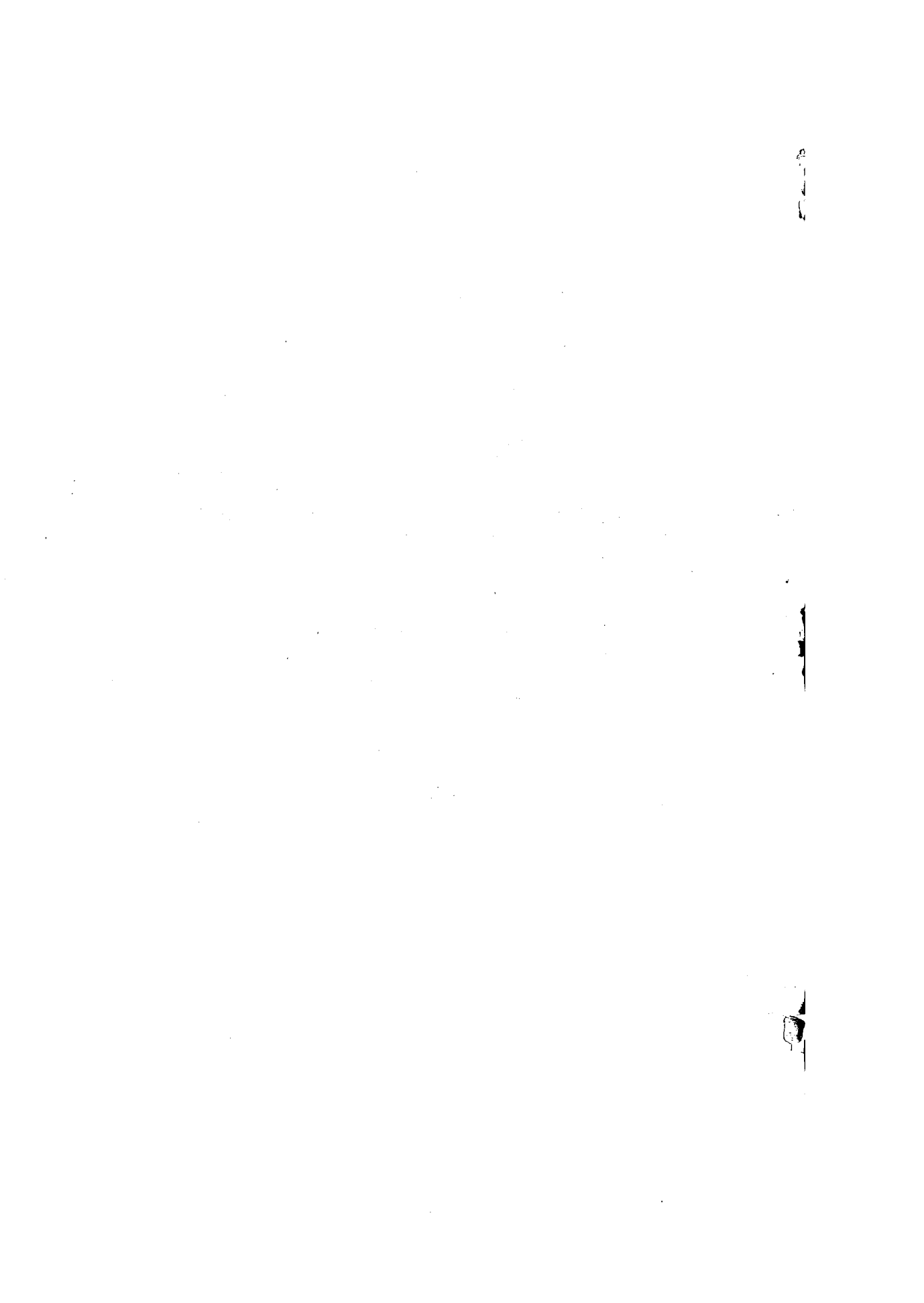
Authors should return the proofs within 7 days after receipt, indicating their O.K. for print. All additions or alterations made by the author will be carried only if the author defrays the costs.

#### REPRINTS

Each author (or joint authors) receives 30 reprints free of charge. Additional reprints against payment may be ordered at the time, when the proofs are returned. Reprints will be issued without covers. No reprints will be issued for "Short notes and records"

TABLE OF CONTENTS

	Page
Rivnay E. Prof. Dr. Hanan Bytinski-Salz - 65 years.	207
Costa M. <u>Antennoseius bytinskii</u> sp. nov., with notes on the genus <u>Antennoseius</u> Berlese ( <u>Acari</u> , <u>Mesostigmata</u> ) in Israel.	217
Donahaye E. and M. Calderon - Additional records and list of insects associated with stored products in Israel.	227
Fishelson L. Two new species of the genus <u>Chorthippus</u> ( <u>Acridinae</u> ) from Israel.	235
Swirsky E. M. Wysoki and S. Greenberg - Varietal susceptibility of pear trees to attack of <u>Aphanostigma piri</u> Chol. ( <u>Aphidoidea</u> , <u>Phylloxeridae</u> ).	243
Sternlicht M. <u>Kermes bytinskii</u> n. spec. ( <u>Coccoidea</u> , <u>Kermesidae</u> ) in Israel, and observations on its life history.	251
Avidov Z. and U. Yinon - On the phenology of <u>Chilocorus bipustulans</u> (L.).	271
Kaszab Z. Three new East-Mediterranean Meloids ( <u>Coleoptera</u> , <u>Meloidae</u> ).	279
Schedl K. The bark and timber beetles of Israel ( <u>Scolytidae</u> ).	285
Palmoni Y. The <u>Pyralidae</u> of the Lake Tiberias region. A faunistic pheno-ecological survey.	293
Kugler Y. The <u>Muscidae</u> of Israel.	323
Guiglia D. The history of the peculiar genus <u>Fedtschenkia</u> Saussure (1880) ( <u>Hymenoptera</u> : <u>Fedtschenkiidae</u> ).	339
Linsenmaier W. The Chrysid wasps of Palestine ( <u>Chrysididae</u> ). A faunistic catalogue with descriptions of new species and forms.	343
Warncke K. A contribution to the knowledge of the genus <u>Andrena</u> ( <u>Apoidea</u> ) in Israel.	377
Pasteels J. J. New <u>Anthidiinae</u> ( <u>Hymenoptera</u> , <u>Apoidea</u> , <u>Megachilidae</u> ) from the Mediterranean area and from the Near East.	409



PROF. DR. HANAN BYTINSKI-SALZ - 65 YEARS



Prof. Bytinski-Salz, the son of a lawyer, was born on June 24th 1903 in Karlsruhe, Germany, and settled in Israel in 1939. It did not take him long before he became popular among all who studied or taught natural history in this country. He was soon recognized as an authority in many fields of biology and, always willing to impart of his knowledge to whomever was willing to partake of it, he was nicknamed "The Walking Encyclopedia".

Prof. Bytinski-Salz studied at the Universities of Berlin and Freiburg and received his PH.D. degree in 1929. He held a position as assistant at the German-Italian Institute for Marine Biology at Rovigno d'Istria, Italy from 1931-34 and worked later under various grants at Yale University USA, at the John Innes Horticultural Institution in London and at the Zoological Department of the University of Padova.

Prof. Bytinski-Salz is active in many fields of zoology, but this resumé will deal mainly with his activities as an entomologist. As a matter of fact, he came to this science in a roundabout way, having become intrigued by the genetic

work of Prof. Richard Goldschmidt on Lepidoptera at the Kaiser Wilhelm Institute for Biology in Berlin. There he began his research in experimental embryology under Prof. O. Mangold (Publ. Nos. 1,2,3,5) and simultaneously studied the cytogenetics of Lepidoptera hybrids (4,6,7,9,10,15,27); this led him to the study of the systematics of Lepidoptera.

Prof. Bytinski-Salz was the second to prove the dependence of insect development on hormonal influences (the first was Kopeč in 1919, but his paper was overlooked for almost two decades). In 1933 and 1934 he showed, that the interruption of the diapause of pupae in Sphingid hybrids is due to the action of a hormone. He also proved that the absence of this hormone is due to a disharmonic chromosome combination between the autosomes of the parental species and the Y chromosome of the maternal species.

His papers on Lepidoptera hybrids are also of considerable interest for problems of evolution of species. In his papers on hybrids of the Celerio-Pergesa species group he could elucidate the relationship between species of the two genera which are chiefly sympatric. The importance of his investigations can best be judged from the last sentence of his paper on the hybrids of the Platysamia species complex (27) "As a matter of fact, the present paper presents the first case in the animal kingdom, where a cytological, genetical and anatomical analysis of the relationship within a species group was carried out, between species which show hybrid fertility, and which all occur as vicariant species in separate areas of distribution".

When working on his hybrid Lepidoptera, Prof. Bytinski-Salz strongly felt his shortcoming in the field of taxonomy, and so started to collect butterflies and moths. Through his own collecting trips, by exchange and acquisitions of indetermined material from many foreign countries he built up one of the largest private collections of Palearctic Macrolepidoptera (65.000 specimens including over 1.000 types); later this collection had to be sold to the Zoological Museum of the University of Hamburg.

At the University of Padova he became interested in intermediate forms between species of ants among the genera Myrmica, Leptothorax and Formica, which led him to collecting Formicidae; today he probably has the most complete collection of Palearctic ants East of Italy.

When Prof. Bytinski-Salz came to Israel, he realized that the Lepidoptera were the best known group of insects in this country. So he started to collect all other groups of insects, but after several years concentrated on Hymenoptera, Coleoptera and Lepidoptera. At present his private collection of these groups is the most complete in this country. The other groups he gave to the Department of Zoology of the newly erected University of Tel Aviv as a foundation of an entomological collection.

But Prof. Bytinski-Salz is not only a collector; he is also a taxonomist of the first magnitude; many papers on the taxonomy of Macrolepidoptera, Coleoptera and Hymenoptera have been published by him (42, 44, 52, 58, 60, 66, 69, 70, 71, 74). He thus described more than 100 new species and forms and several scores of new species are named in his honour. But perhaps as important as his own publications are those of foreign scientists, based on material of his collection. A list is included in his last paper (77) in which he gives a survey of the entomological material present in local collections and the faunistic literature related to them. Other publications include discussions on the zoogeography of ants of the Near East (40), on the Ethiopian faunal element in Israel (57) and on the insect fauna of some indigenous trees (41, 72).

During the first years in this country, the years of World War II, Prof. Bytinski-Salz could not find a position fit for his training and accomplishment. During the absence of Prof. F.S. Bodenheimer he supervised the thesis work of M.Sc. students at the Department of Entomology at the Hebrew University, Jerusalem.

In 1944 he moved to Tel Aviv and taught biology at the Kibbutz Teachers Seminary. Later he started work as entomologist at the Agricultural Experiment Station, Rehobot; there he also developed a poison bait against hornets, which had become a serious pest to apiculture (36). During this work he realized the many unsolved problems in the biology of Vespa orientalis and later entrusted his pupil J. Ishay with this research, who among other interesting results, proved for the first time the occurrence of gluconeogenesis in insects (73).

When the state of Israel was founded in 1948, Prof. Bytinski-Salz became chief entomologist and subsequently head of the Plant Quarantine Service at the Ministry of Agriculture at Jaffa. Up to 1960 he devoted much time to the biometrics and faunistics of various insect pests, chiefly wood borers (37, 39, 45, 56, 67, 75) and on the enlargement and reorganisation of the entomological collections. He was also responsible for the compilation of quarantine regulations for the import of plant products from foreign countries. He subsequently published a list of insects and mites that were introduced in this country (68).

With the establishment of the Tel Aviv University, Prof. Bytinski-Salz was appointed Professor of Zoology, an office he holds to this day. For the first time, since his arrival in this country, advantage was taken of his vast store of knowledge in biological sciences. He taught or is teaching entomology, histology, embryology, sexuality, paleontology and evolution (the latter subject also at the Hebrew University, Jerusalem).

Because of his easy going, good nature and fine sense of humour Prof. Bytinski-Salz is liked and respected by all who know him. He heads the Zoological Society of Israel and is a member of the editorial board of the Israel Journal of Zoology. He is also Editor of the Israel Journal of Entomology, a member of the Faunistic Committee of the Israel Academy of Sciences, a Fellow of the Royal Entomological Society of London, a Socio della Societa Italiana di Entomologia and

other societies. With all this activity he did not give up collecting, and often he may be found with his collecting net in some remote Wadi in the desert or on the steep slopes of Mt. Hermon.

All his friends wish him in his activities much success for many further fruitful years.

The Editors and the Board of the Entomological Society of Israel want to express their sincere gratitude to the many friends and colleagues of Prof. Bytinski-Salz, for publishing their scientific contributions in this special issue.

E. Rivnay

#### Bibliography

1. Bytinski-Salz, H. 1929 Untersuchungen über das Verhalten des präsumtiven Gastrulaectoderms. Arch. Ent. Mech., 114: 593-664.
2. Bytinski-Salz, H. 1929 Die Wirkung von xenoplastischen Implantaten und Embryonalextrakten auf die Entwicklung junger Amphibienkeime. Ibid., 114: 665-685.
3. Bytinski-Salz, H. 1929 Untersuchungen über die Determination und Induktionsfähigkeit einiger Keimbezirke der Anuren. Ibid., 118: 121-163.
4. Bytinski-Salz, H. (with Günther) 1929 Untersuchungen an Schmetterlingshybriden. I. Morphologie und Cytologie einiger Bastarde der Celerio hybr. galliphorbiae-Gruppe. Z. indukt. Abstamm.-Vererbungslehre, 53: 153-234.
5. Bytinski-Salz, H. 1931 Untersuchungen über die Induktionsfähigkeit der hinteren Medullarplattenbezirke. Arch. Ent. Mech., 123: 518-564.
6. Bytinski-Salz, H. 1933 Untersuchungen an Lepidopterenhybriden II: Entwicklungsphysiologische Experimente über die Wirkung disharmonischer Chromosomenkombinationen. Ibid., 129: 356-387.
7. Bytinski-Salz, H. 1933 Untersuchungen an Lepidopterenhybriden IV. Das Auftreten der sogenannten atavistischen Linie bei Bastarden zwischen Celerio euphorbiae L. und Celerio verspertilio Esp. Ent. Z., 46: 209-211; 220-225.
8. Bytinski-Salz, H. 1933 Ein Fall sekundärer Symmetrie bei Copepoden. Not. Ist. Biol. Mar. Rovigno, 10: 16 pp.



9. Bytinski-Salz, H. 1933 Nomenklatorisches zur Benennung von Bastarden. Int. Ent. Zeitschr., 27: 153-162.
10. Bytinski-Salz, H. 1934 Untersuchungen an Lepidopterenhybriden III: Verwandtschaftsverhältnisse zwischen den Arten der Gattungen Celerio und Pergesa nach Untersuchungen über die Zytologie und Fertilität ihrer Bastarde. Biol. Zbl., 54: 300-313.
11. Bytinski-Salz, H. 1934 Ein Beitrag zur Kenntnis der Lepidopterenfauna Sardiniens. Int. Ent. Zeitschr., 28: 41 pp.
12. Bytinski-Salz, H. 1935 Zur Technik der Untersuchung des Genitalapparates der Lepidopteren. Int. Ent. Zeitschr., 29: 66-70.
13. Bytinski-Salz, H. 1935 Heteroplastic transplantation of the hypophysis in Amblystoma. J. exp. Zool. 72: 51-73.
14. Bytinski-Salz, H. 1935 Un Policlodo (Stylochus pilidium Lang) dannoso ai parchi ostricoli. Thalassia, 2: 25 pp.
15. Bytinski-Salz, H. 1935 Two species hybrids in moths. Proc. R. Ent. Soc. London, 10: 41-44.
16. Bytinski-Salz, H. 1935 New Heterocera from Asia minor. Ent. Rec. Suppl.: 6 pp.
17. Bytinski-Salz, H. 1936 Die Ausbildung des Chitinpanzers in der Schmetterlingspuppe. Biol. Zbl., 56: 35-61.
18. Bytinski-Salz, H. 1936 Kombinatorische Einheitsleistungen in der Entwicklungsgeschichte. C.R. XII. Congr. Int. Zool. Lisbonne: 594-618.
19. Bytinski-Salz, H. 1936 Lo sviluppo della coda negli Anfibi. I. II. Rend. Acc. Naz., 24: 34-40.
20. Bytinski-Salz, H. 1936 Lo sviluppo della coda negli Anfibi. III. IV. Ibid.; 82-88.
21. Bytinski-Salz, H. 1937 New Lepidoptera from Iran. Ent. Rec. Suppl.: 15 pp.
22. Bytinski-Salz, H. 1937 Secondo contributo alla Lepidoptero-fauna della Sardegna. Mem. Soc. Ital. Entom., 15: 194-212.
23. Bytinski-Salz, H. 1937 Ricerche sperimentali sugli organizzatori nello sviluppo nei Ciclostomi. La Ricerca Scient. Anno VIII, 2: 1-12.
24. Bytinski-Salz, H. 1937 Trapianti di "organizzatore" nelle uova di Lampetra. Arch. Ital. Anat. Embriol., 39: 177-228.
25. Bytinski-Salz, H. and Elias 1938 Studi sur Cromatofori dei Discoglossidae I. Arch. Ital. Anat. Embriol., 40: 1-36.

26. Bytinski-Salz, H. 1938 Chromatophorenstudien II. Struktur und Determination des adepidermalen Melanophorennetzes bei Bombina. Arch. exp. Zellf., 22: 132-170.
27. Bytinski-Salz, H. 1938 Untersuchungen an Lepidopterenhybriden V: Die Verwandtschaft der Platysamia-Arten (Lepidoptera Saturnidae) nach Untersuchungen über die Fertilität und die Chromosomenverhältnisse ihrer Bastarde. Arch. exp. Zellf., 22: 217-237.
28. Bytinski-Salz, H. 1939 On Rhyacia festiva, ssp. conflua and ssp. thulei. Ent. Rec., 51: 29-36.
29. Bytinski-Salz, H. 1939 New Amatidae from Asia. Ent. Rec., 51: 149-153.
30. Bytinski-Salz, H. 1939 New and little known Asiatic Phalaenoidea. Ibid., 51: 117-121.
31. Bytinski-Salz, H. 1939 New and little known forms of Hepialus mostly from Great Britain. Ibid., 51: 81-85.
32. Bytinski-Salz, H. 1939 New species and forms of Palaearctic Bombycine Moths. Ibid., 51: 165-167.
33. Bytinski-Salz, H. 1941 The fight against the house-fly in Italy and Palestine. Hyg. Health News, 1 (7-8) (In Hebrew).
34. Bytinski-Salz, H. 1941 Tularaemia - a disease which will probably reach Palestine soon. Ibid., 2 (3) (In Hebrew).
35. Bytinski-Salz, H. 1948 The collecting and preparing of insects. Tel-Aviv: 127 pp. (In Hebrew).
36. Rivnay, Bytinski-Salz, H. 1949 The Oriental Hornet (Vespa orientalis); its biology in Israel. Agr. Res. Stat. Rehovot Bull. 52: 34 pp.
37. Bytinski-Salz, H. and Neumark 1952 The Eucalyptus borer (Phoracantha semipunctata F.) in Israel. Trans. 9th Int. Congr. Ent.: 696-699.
38. Bytinski-Salz, H. 1952 Safflower pests in Israel. Ibid., 1: 745-750.
39. Bytinski-Salz, H. 1952 Two important tree borers in Israel. F.A.O. Plant Prot. Bull. 1 (3).
40. Bytinski-Salz, H. 1953 Zoogeography of the ants in the Near East. Rev. Fac. Sc. Univ. Istanbul, 18: 67-74.
41. Bytinski-Salz, H. 1954 Insects associated with desert acacias in Israel. Bull. Res. C. Israel, 4: 284-292.
42. Bytinski-Salz, H. 1954 Collecting Tenebrionid beetles with poisoned bait. Ent. Rec., 67: 313-316.
43. Bytinski-Salz, H. 1955 Prionothea coronata Ol. freyi ssp. nov. Entomol. Arb. Mus. Frey, 6: 313-316.

44. de Beaumont, Bytinski-Salz, H. 1955 The Sphecidae (Hymen.) of Erez Israel. I. (Subfam. Sphecinae, Nyssoninae; trib. Bembicini, Stizini). Bull. Res. C. Israel, 5: 32-60.
45. Bytinski-Salz, H., and Neumark 1955 Plant Protection Problems. La Yaaran, 5: 20-23 (In Hebrew).
46. Bytinski-Salz, H. 1955 The Cerambycidae of Israel. Bull. Res. C. Israel, 5B: 207-226.
47. Bytinski-Salz, H. 1955 Fig trees in danger. Min. Agr. Agric. Publ., 68: 5 pp. (In Hebrew).
48. Bytinski-Salz, H. 1956 The survival of senile tissues. I. The transplantation of whole eyes from adults to larval stages in the European Brook Lamprey (Lampetra planeri). Riv. Biol., 48: 1-36.
49. Bytinski-Salz, H. 1956 Coleoptera and Hymenoptera from a journey through Asia minor. I. Rev. Fac. Sc. Univ. Istanbul, 21: 211-229.
50. Bytinski-Salz, H. 1957 id. II.: Descriptions of new species and forms. Ibid., 22: 163-169.
51. Bytinski-Salz, H. 1957 Chromatophore Studies III: Structural changes in the peritoneal melanophores in Pelobates syriacus. Bull. Res. C. Israel, 6B: 155-169.
52. de Beaumont, Bytinski-Salz, H. 1959 The Sphecidae of Erez Israel. II. Nyssoninae, Philanthinae. Ibid., 8B: 99-152.
53. Bytinski-Salz, H. 1960 List of insects of the Dead Sea region. Bull. Teachers Assoc. Israel: 9-20.
54. Bytinski-Salz, H. 1960 Chromatophore studies IV: The behaviour of the melanophores in the regenerating skin of Discoglossus; V: The problem of "epidermisation" of the cornea after extirpation of the eye. Bull. Res. Council. Israel, 9B: 1-23.
55. Bytinski-Salz, H. 1960 Chromatophore studies VI: The behaviour of the melanophores in the developing limb bud of Discoglossus pictus. Bull. Res. Council. Israel, 9B: 24-34.
56. Bytinski-Salz, H. 1961 The tropical Fig borer in Israel. XI Intern. Congr. Entomologie, 2: 229-235.
57. Bytinski-Salz, H. 1961 The Ethiopian Element in the Insect Fauna of Israel. Ibid.: 457-463.
58. Bytinski-Salz, H. 1961 Micrococcus bodenheimeri n. sp. Bull. Res. Council. Israel, 10B: 90-96.
59. Bytinski-Salz, H. 1961 Chromatophore studies VII: The behaviour of Bombina - melanophores during the epidermisation of the cornea. Embryologia, 6: Mangold Festschrift, 67-83.

60. Bytinski-Salz, H. 1963 Geographical variation and sex ratio in Leucospis gigas (Hym. Chalcidoidea) Acta Entom. Mus. Nat. Pragae, 35: 527-530.
61. Bytinski-Salz, H. 1963 Chromatophore studies VIII: The occurrence of giant melanophores in the epidermis of Pelobates. Isr. J. Zool., 12: 41-46.
62. Bytinski-Salz, H. 1963 Analysis of an epidermal melanophore pattern in Pelobates (Anura). Proc. XVI Int. Congress of Zoology, 2: 247
63. Bytinski-Salz, H. 1964 Chromatophore studies IX: The behaviour of the epidermal melanophores of anurans during immigration into the cornea after extirpation of the eye. Arch. Ital. Anat. Embriol., 57: 105-144.
64. Bytinski-Salz, H. 1964 Dr. med., Dr. phil. Walter Steinitz. Israel J. Zool., 13: 143-144.
65. Bytinski-Salz, H. 1965 Recent findings of Hippopotamus in Israel. Israel J. Zool., 14: 38-48.
66. Bytinski-Salz, H. 1965 Vein variations in Plagiolepis (Hym. Form.) and their possible phylogenetic significance. Proc. XIIIth International Congress of Entomology: 71-73.
67. Bytinski-Salz, H. 1965 Effects of modern agrotechnical methods on the agricultural insect pest populations in Israel. Proc. XIIIth Int. Congr. Ent. London: 583.
68. Bytinski-Salz, H. 1966 An annotated list of insects and mites introduced into Israel. Israel J. Entom., 1: 15-48.
69. Bytinski-Salz, H. 1966 Lucanus cervus L. (ssp. syriacus Plan.) in Israel. Israel J. Entom., 1: 189.
70. Bytinski-Salz, H. 1966 Four hawk moths new to Israel. Israel J. Entom., 1: 189-191.
71. Bytinski-Salz, H. 1966 Observations on migrating moths. Israel J. Entom., 1: 193.
72. Bytinski-Salz, H., Sternlicht M. 1967 Insects associated with oaks in Israel. Israel J. Entom., 2: 107-143.
73. Ishay, J., Bytinski-Salz, H., Shulov, A. 1967 Contributions to the bionomics of the Oriental hornet (Vespa orientalis) in Israel, Israel J. Entom., 2: 45-106.
74. Halperin, J., Bytinski-Salz, H. 1967 An unsuccessful introduction of Formica into Israel. Israel J. Entom., 2: 190-193.
75. Bytinski-Salz, H. 1967 Termite damage in Israel. Abstracta 6th Int. Congr. Plant Prot. Vienna: 670-672.

76. Bytinski-Salz, H. 1968 Secretory properties of the tadpole epidermis (abstr.) Amer. Zool., 8: 784.
77. Bytinski-Salz, H. 1969 The present status of taxonomic Entomology (Arthro-  
poda) in Israel, Israel J. Entom., 4 157-201.

## NOTICE

The ISRAEL JOURNAL OF ENTOMOLOGY is distributed free of charge to members of the Entomological Society of Israel. Copies of the journal may be purchased at the price of IL. 15.- or \$ 6.00 postfree from the Treasurer of the society, Mrs. V. Melamed Madjar, Volcani Institute of Agriculture, Rehovoth, P.O.B. 15; payments to be made out to: Bank Discount, Rishon le Zion, Account No. 62693.

All other correspondence concerning the journal should be addressed to one of the editors: Prof. H. BYTINSKI-SALZ, Department of Zoology, Tel-Aviv University, 155 Herzl Street, Tel-Aviv, or Prof. A. TAHORI, Israel Institute for Biological Research, Ness Ziona.

### NOTICE TO CONTRIBUTORS

Contributors are solicited for publications in the journal concerning:

- a) Morphology, physiology, taxonomy, faunistics and bionomics of insects and mites of the Near East.
- b) Papers on applied entomology of the same region.
- c) Reviews of general problems in Entomology in which our readers may be interested.

Papers are published in English only and are accepted with the understanding that they have not been published previously in any other European language, or sent for publication to another journal.

The editor reserves the right to reject or shorten the manuscript, correct its style and/or send it back to the author for alteration.



ד"ר מירון

חברת כימית חיספה

ח מ ר י ה ד ב ר ה

\* לחקלאות

\* לגן

\* ולבית

שרות ארצי

להדברת מכרסמים וחרקים

ת.ד. 10171 מפרץ חיספה טל. 721464

# תכשירי "סיאנמיד" בשרות החקלאות

סיאולן • מלתיון ULV • סיקוסל • מלפרקס  
האינסקטיסידים של **CYANAMID** ארצות הברית  
מחוללים מהפכה בהשמדת מזיקים



המפיצים הבלעדיים לישראל:  
ניאופרס בע"מ, רחוב פינסקר 7, תל-אביב, טלפון 55017

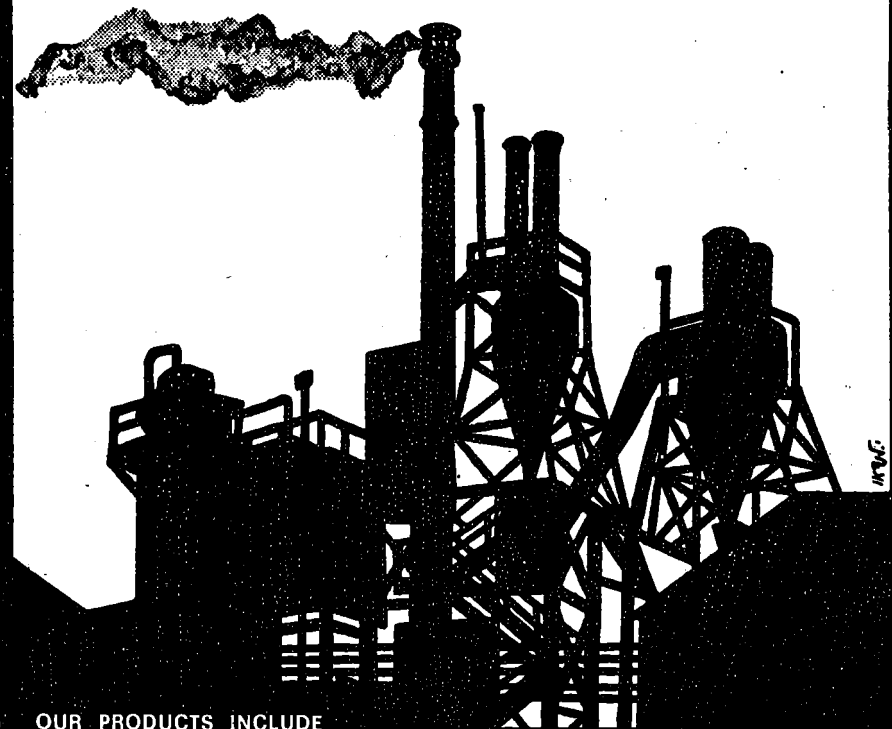


**MAKHTESHIM BEER-SHEVA  
CHEMICAL WORKS LTD.  
ISRAEL**

P.O.B. 60, Cables: "Machem"  
Phone: 71221 (6 lines)

# BETTER PLANT PROTECTION WITH MAKHTESHIM PESTICIDES

**ISRAEL'S LEADING PRODUCERS  
AND EXPORTERS OF  
PLANT PROTECTION CHEMICALS**



## OUR PRODUCTS INCLUDE

**Insecticides:** Acarin (Dicofol),  
Benzilan (Chlorobenzilat),  
Bromex (Naled),  
Cotnion-Ethyl (Azinphos ethyl),  
Cotnion-Methyl (Azinphos methyl),  
Divipan (Dichlorvos),  
Malactol (Mercaptothion),  
Ravyon (Carbaryl),  
Thionex (Endosulfan).

**Fungicides:** Folpan (Folpet),  
Merpan (Captan), and other  
technical grade materials and  
formulations.

Tag - Fruit Coating Wax.

**Industrial Chemicals :**  
Chlorine, Caustic Soda

**Plastics :** Polyester Resins  
for uses in agriculture, building  
and industry.







PALIMPORT LIMITED

I. LUXEMBOURG CHEMICAL CORPORATION LIMITED

FIELD RESEARCH \* IMPORTS \* FIELD SERVICE

IN ALL BRANCHES OF  
CROP PROTECTION

INSECTICIDES \* HERBICIDES \* FUNGICIDES

P. O. B. BOX 13, 74 PETACH TIKVA ROAD, TEL AVIV.

DISHON CORPORATION LTD.

AGENTS AND DISTRIBUTORS  
FOR CHEMICALS AND  
PLANT PROTECTION PRODUCTS

ADDRESS: 24 Nachlat Benjamin St.  
Tel Aviv, Israel.

Telephone: 59548/9

### NASIMAN 73

A liquid bait for the use against the Mediterranean Fruit Fly (*Ceratitis capitata*) and other species of fruit flies. Used exclusively by the Israeli Citrus Marketing Board against the Mediterranean Fruit Fly.

### HALIZAN OF TAMOGAN

A stable and highly attractant granular bait for use against species of snails and slugs; having a prolonged effectiveness and being resistant to fruit.

### ZITAN 85, ZITAN 98 AND ZITAN 114

Liquid baits for use against the Olive Fly (*Dacus oleae*) and various other species of Fruit flies.

### PRODAN, PRODAN 100 AND PRODAN 500

Well known granular baits for use against species of Noctuidae Caterpillars, *Grillotalpa* etc. Due to their excellent effectiveness these baits have created for themselves an outstanding image with numerous clients in Israel as well as abroad.

### NIRAN

An effective preparation for use against Ants, Termites and all other species of soil insects.

### NAMILAN

An effective preparation for use against Ants, Termites.

### PIRAN

Plastic cones for the control of wood boring caterpillars such as: (*Zeuzera pyrina*) Tiger moth and *Apatemonachus* in orchards and woods.

### BARAN

A granular preparation for the control of field mice and rats.

INQUIRIES  
INVITED.

**TAMOGAN** LTD.  
P.O.B. 2438  
TEL-AVIV



**תמוגן** בנ"ת  
ת.ד. 2438  
תל-אביב

INSECTICIDES & BAITS

**DIPTAGAN**

**LEBAYCID**

**ARGAN**

**FALGAN**

PLANT GROWTH REGULATORS

**C.C.C.**  
**ETHREL**

HERBICIDES

**AZOLAN**

**WEEDAZOL**

**PYRAMIN**

**DIUREX**

**GATNON**

**NEBUREX**

**DURSOL (M.S.M.A.)**

FUNGICIDES

**MANEBGAN**

**MORESTAN**

**POLYRAM**

**ALLISAN**



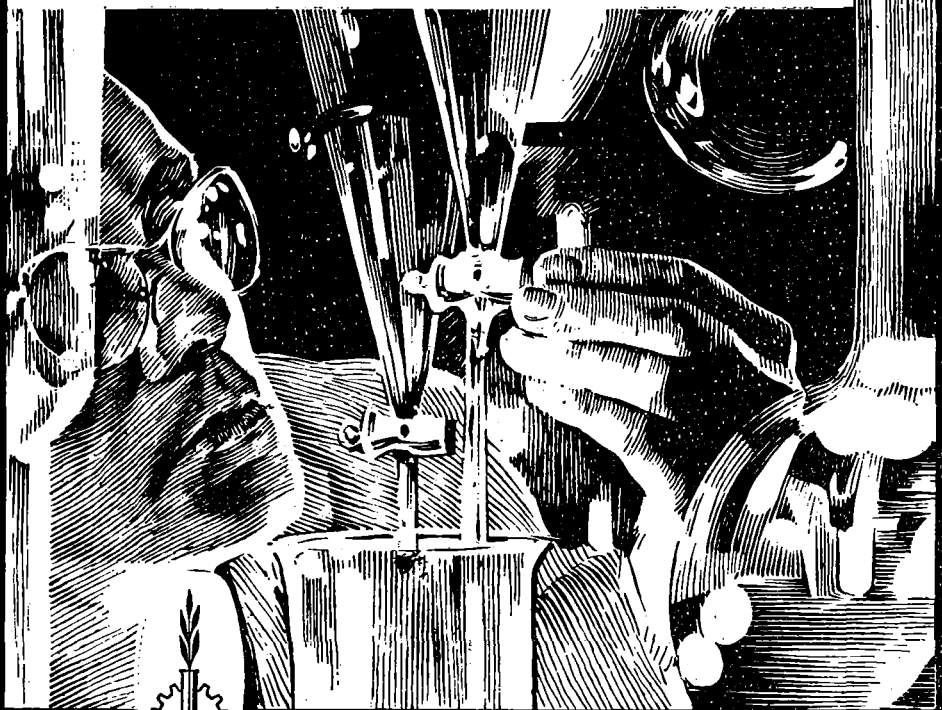
**AGAN**

**Chemical Manufacturers Ltd.**

TEL-AVIV, 124 BEN-ZVI ROAD P.O.B. 8442  
TEL. 822383

# PAZCHEM LTD.

ISRAEL'S LEADING  
MANUFACTURER OF  
AGRICULTURAL CHEMICALS  
AND  
HOUSEHOLD CHEMICAL  
SPECIALTIES



EXPORT INQUIRIES INVITED

# בא אל סך חקלאי



תוכל להנות — מכל הבחינות —  
ממטע תפוחי עץ מניב ובריא  
ע"י הדברת עש התפוח והאקריות;  
ובשדות כותנה-ע"י הדברת הזיפית  
בעזרת התכשיר החדש בעל טווח  
הפעילות הרחב ולאורך זמן

## פוזלון מכיב זולון 35%

תוצרת RHÔNE-POULENC

הצטרף לחקלאים הרבים הנהנים מיתרונותיו של תכשיר זה |  
אחים מילצין בע"מ • המחלקה החקלאית

**להדברת נניחת הדם ונניחת העלה**  
בתפוחי עץ

**קילוואל**

בעזרת קוטל החרקים הסינטי קילוואל-תוצרת RHÔNE-POULENC תדביר את כנימות הדם והעלה.  
ע"י ריסוס נוף העץ מקבלים הדברה של הכנימה הן על גבי הנוף והן על גבי הגזע והשורשים.  
אחים מילצין בע"מ • המחלקה החקלאית