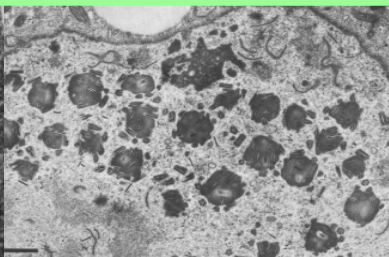
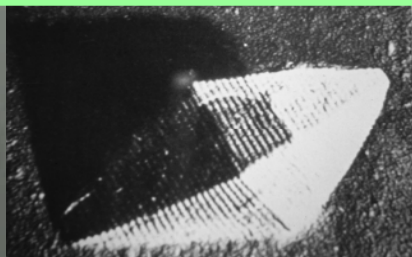


Insect pathogens and entomoparasitic nematodes

Convenor: Ralf-Udo Ehlers
Liaison-Officer: Jürg Huber

Meetings shifting with SIP international meetings



IOBC-WPRS
OILB-SROP

Ralf-Udo Ehlers
ehlers@biotec.uni-kiel.de

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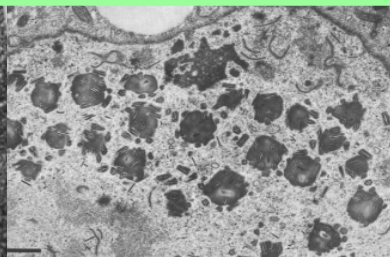
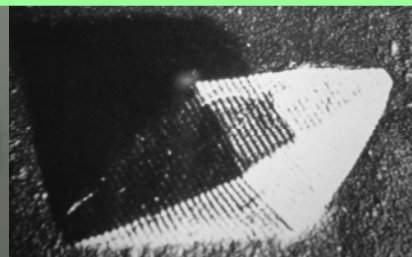
Prof. Phytopathology at Fac. for Agriculture and Food Science, CAU, Kiel (DE): Entomology, Pest Management, Biological control and Biotechnology

Research: EPN, *Bti*, microbial antagonists > *B. napus* diseases, liquid culture production of micro-organisms + nematodes

Guest Prof. at Faculty of Science, Dept. of Biology, University Gent (B): PINC and Erasmus European Master in Nematology: EPN

Sub-Convenor Entomoparasitic Nematodes since 1988 and Convenor of WG since 2005

Editorial Board BioControl, Nematology, J. Pest Science



Ralf-Udo Ehlers
ehlers@biotec.uni-kiel.de

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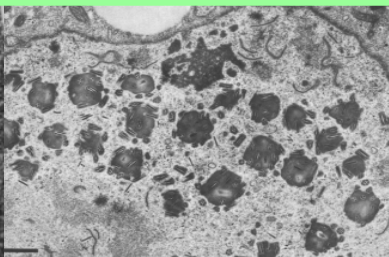
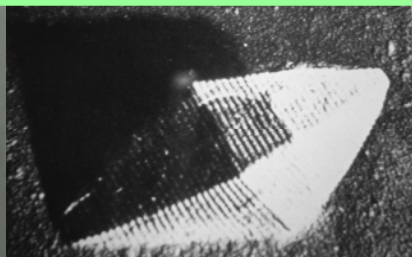
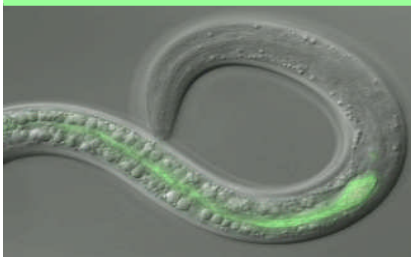
During 2006-2007:

Co-ordination of the EU policy support action REBECA
Regulation of Biological Control Agents in Europe

www.rebeca-net.de

Vice chairman of COST Action 862
Bacterial toxins for insect control

www.cost862.com



Subgroups + Convenors

Viruses: **Miguel LOPEZ-FERBER**, Ecole des Mines d'Alès, France

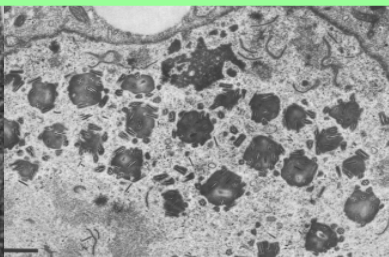
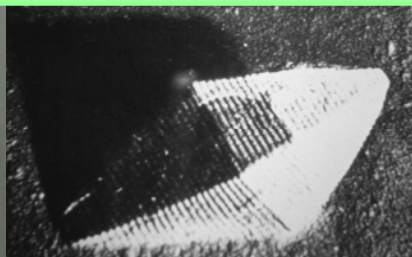
New: Bacteria: **Neil CRICKMORE**, Univ. Sussex, Brighton, UK

Fungi: **Cezary TKACZUK**, University of Podlasie, Poland

Entomoparasitic nematodes: **Itamar GLAZER**, Volcani Center, Israel

Soil insect pests: **Jürg ENKERLI**, Agroscope Reckenholz, Switzerland

Slugs and snails: **William SYMONDSON**, Cardiff University, Wales, UK



Virus

Since the WG meeting 2005 in Locorotondo (IT)
CpGV success story, since chemical products failed to provide >
50% control, WG very active since resistance against CpGV

Based on OECD document and REBECA activity, SANCO has
put GV species on Annex 1

Spodex now listed on Annex 1

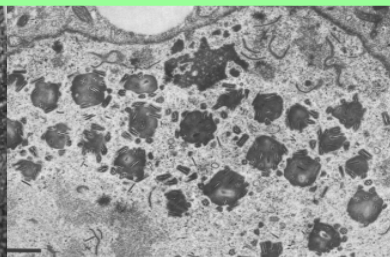
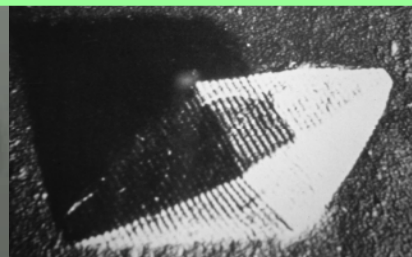
Other virus listings pending:

Adoxophyes orana GV (strain BV-0001)

Helicoverpa armigera nucleopolyhedrovirus (HearNPV)

Spodoptera littoralis nucleopolyhedrovirus (SL NPV)

Contributions good mix of virus genetics & applied science



Bacteria

Subgroup completely new to the WG

Subgroup convenor: Neil Crickmore

Joint meeting Ales 2007 and Pamplona 2009 with COST Action 862 “Bacterial Toxins for Insect Control”

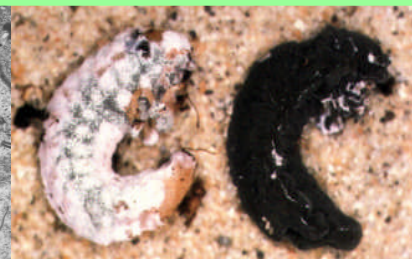
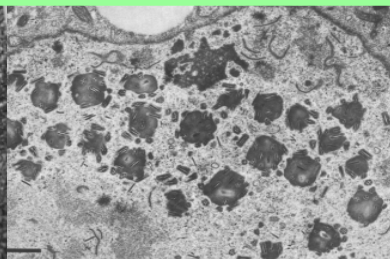
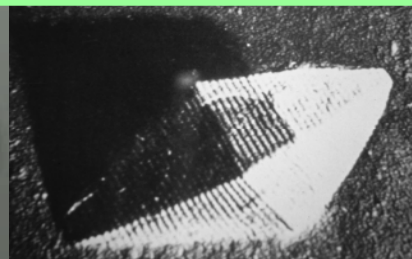
End of COST Action 2010

***Bacillus thuringiensis aizawai* (ABTS-1857 and GC-91)**

***Bacillus thuringiensis israelensis* (AM 65-52)**

***Bacillus thuringiensis kurstaki* (ABTS-351, PB 54, SA 11, SA 12 and EG 2348)**

***Bacillus thuringiensis tenebrionis* (NB 176)**



Fungi

Listed on Annex 1:

Beauveria bassiana (ATCC 74040 and GHA)

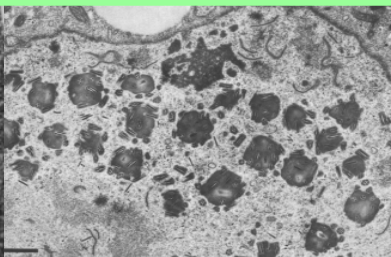
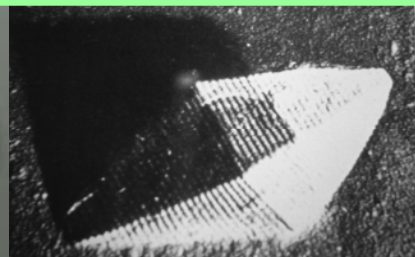
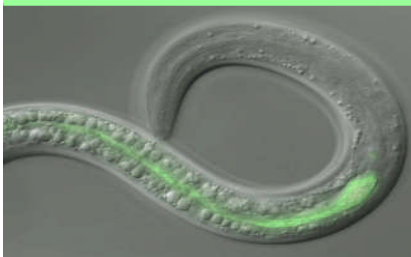
Lecanicillium muscarium (Ve6) (former *Verticillium lecanii*)

Metarhizium anisopliae (BIPESCO 5F/52)

Paecilomyces fumosoroseus (Apopka strain 92)

B. brongniartii files was rejected

P. lilacinus and *Paecilomyces fumosoroseus* (strain Fe9901)
pending



EPN

Heterorhabditis bacteriophora currently sequenced by Genome Sequencing Center in the USA and RNAi techniques successfully tested

EPN very fast growing market

Existing applications well established and increase in sales

New applications:

Overwintering larvae of *Cydia pomonella*

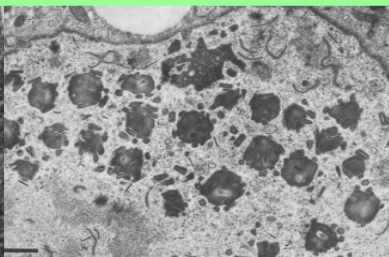
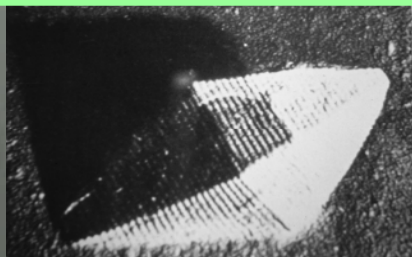
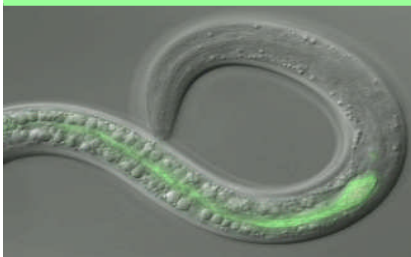
Thrips + White Flies in greenhouses

Capnodis tenebrionis in stone fruit

Balaninus nucum in hazelnuts

Red Palm Weevil *Rhynchophorus ferrugineus*

Corn Rootworm *Diabrotica virgifera virgifera*



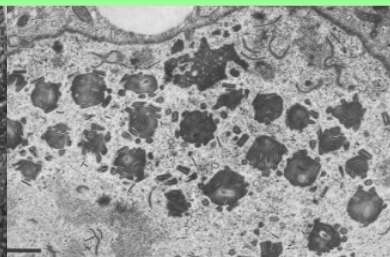
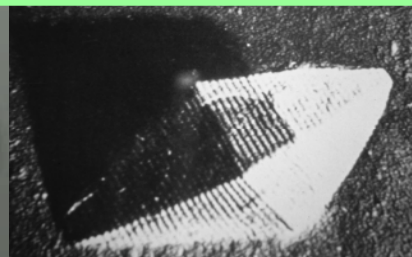
Soil Insects Pests

Former “Melolontha Group”

**Joint meetings with other WG groups in
Ales 2007 and Pamplona 2009**

Wireworms are increasingly problematic

Diabrotica is gaining importance



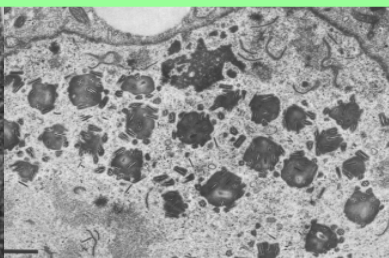
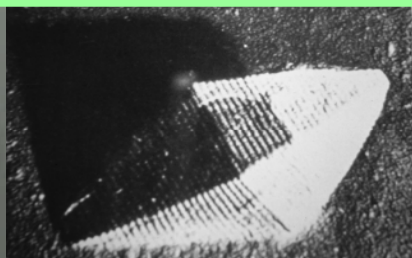
Slugs and Snails

Offer to meet with other WG groups in 2003 (Salzau, DE) or in 2007 (Alés, FR) was not accepted

Problem with name of WG

Pamplona 2009 SG convenor accepted to participate also to propose name change, but then withdrew his support

Several participants are working in the entomoparasitic nematode group and would join the WG



WG Meeting Alés 2007

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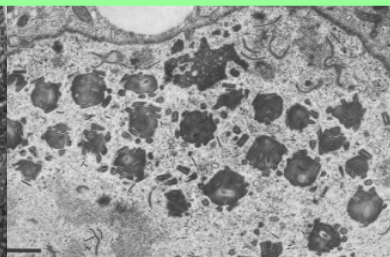
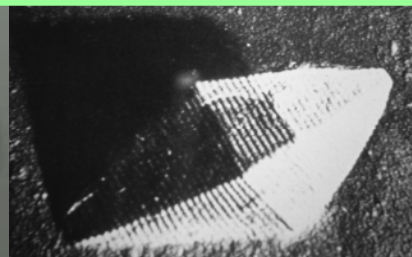
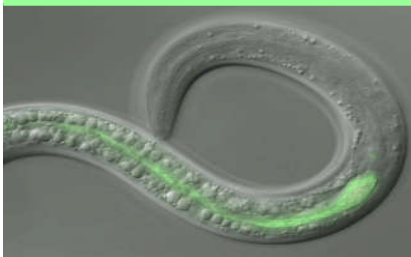
150 participants

Several contributions also on Bt and nematode symbiotic bacteria from the COST Action 862

REBECA Workshop: registration requirements ecotox of microbials

Sub-convenors helped with revision of papers

Bulletin was published a year after the meeting due to delay in printing



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WG Meeting 2009 Navarra, Spain

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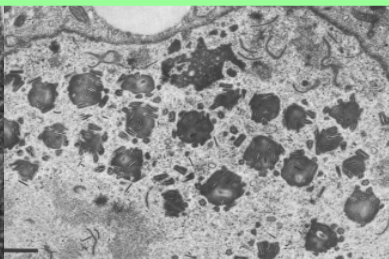
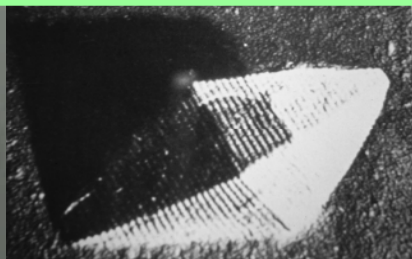
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Institute for Phytopathology

Local Organizer: Primitivo Caballero

180 participants

Printed the Bulletin [xxvi + 519 pp. = 6 €] in Pamplona ready for the meeting had three major advantages:

- Saving costs for sending
- Much improved quality because all had to contribute
- Many more contributions (almost complete)



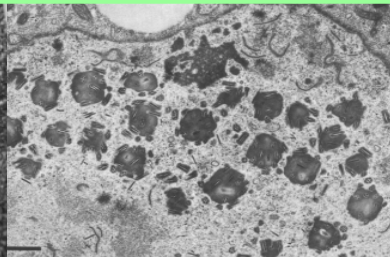
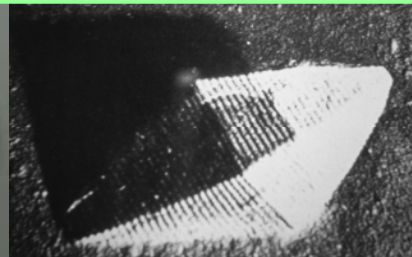
WG Meeting 2009 Navarra, Spain

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Attempts to produce a “concept paper” on future R&D needs to be subject for funding by the EU DG research received little support during the discussions but might be supported by keynote speakers and subgroup convenors

Maybe we should consider a joint approach by IOBC/WPRS?



IOBC-WPRS
OILB-SROP

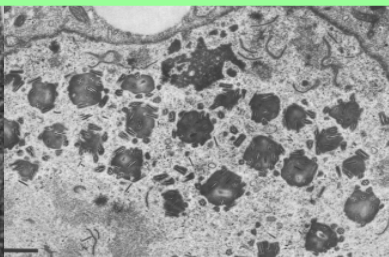
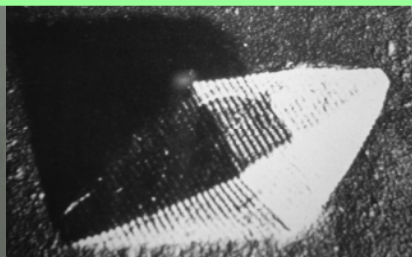
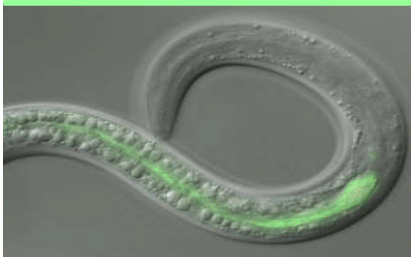
Next WG Meeting 2011

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Christian-Albrechts-University of Kiel
Institute for Phytopathology

Local Organizer: Hermann Strasser
Innsbruck University, Austria

19./20. - 23./24. June 2011



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OILB-SROP