

numbers temporarily, unexpected toxic effects beyond target species may be produced. This is the logical expectation of pesticide use where most pesticides are applied. Resurgence/resistance to pesticides, rise of secondary pests and environmental pollution arise from indiscriminate use of pesticides. Pesticides are harmful and there is an awareness in government industry and agriculture that pesticide chemicals are potentially so. The question remains whether this awareness is great enough and whether it is focused sufficiently on hazards to species other than the pest species, yet this fact is lightly regarded unless complaints are made. The Entomological society of Nigeria (ESN) has successfully provided answers to these problems by reviewing and publishing a "Handbook of Insecticides Available in Nigeria". The recent edition edited by C.I. Amatobi, A.O. Omoloye, R.S. Adamu and M.B. Sosan was a mandate of ESN and is now available to government, members of the Society and everybody for information and necessary action.

There is no doubt that misplaced emphasis on chemicals modifies assessment to the nature and values of advantages brought about by pest control. Our government should henceforth be able to legislate on the proper use of pesticides on food crops, determine safe levels and publicize the hazards resulting from overuse and abuse.

Recognition, Promotion and bereavement

Communique of 2013 conference was published in The Nation and The Guardian Newspapers. Press conference was granted to President and the Vice President from about eleven (11) media

houses with an interview by Channels TV. This was aired many times with emphasis on Insect Taxonomy and the need to establish Insect Museum of Natural History in Nigeria.

Since the last conference, we have had recognitions, promotions and losses.

1. Prof E.O. Ogunwolu (Makurdi branch) was given an award for distinguished long service to the University of Agriculture, Makurdi during the University's last convocation ceremony,
2. Prof R.I. Egwatu (Awka branch) appointed Emeritus professor of Unizik since 2011.
3. Prof A.E. Akingbohungebe, FESN (Ile-Ife branch) appointed Emeritus Professor at OAU, Ile-Ife.
4. Prof I.E. Nwana FESN (Awka branch) appointed chairman of planning & Implementation Committee of a proposed University in Achina, Anambra State,
5. Prof B.A. Matanmi FESN (Ile-Ife branch) celebrated his 70th birthday adversary.
6. ESN commends Dr. J.O. Williams, past Executive Director of NSPRI, Ilorin who retired from service.
7. Prof. W.A. Muse FESN elected chairman Committee of Dean of OAU, Ile-Ife.
8. Prof. S. Asala (Abuja branch) appointed Provost College of Health Sciences.

Many members were promoted to various positions in their Institutions. To the rank of professor we have:

Dr A. Omoloye (Ibadan branch),

Dr F.I. Aigbodion (Benin branch), Dr M.U. Ukwela (Makurdi /Yandev/Lafia branch), Dr N.D. Ibrahim (Sokoto branch), Dr M.O. Ashamo (National Secretary, Akure branch), Dr AT, Ande (Ilorin/Ogbomoso branch., Drs A.B.O. Ogedegbe and J. Rotimi (Benin branch) were promoted to the rank of Associate professor while Dr J.O. Akinneye (Chairman, Akure branch) was elevated to the post of Senior lecturer. A.O. Omoregie (Benin branch) was upgraded to the rank of Assistant Lecturer.

The following members successfully defended their Ph.D thesis and awarded degree of Doctor of Philosophy in Entomology. They are Aneni (Benin branch), Mrs S.W. Asala (Abuja branch) defended Ph.D and appointed Deputy Dean, Faculty of Agriculture; and K.D. Ileke (Akure branch).

We rejoice with Professors Edward Agbo Omudu (Makurdi branch) and Timothy Eidi (PH/Yenagoa branch) who delivered their inaugural lectures this year.

We are pleased with the appointments of Dr Yahaya M. Abdullah! (Sokoto branch) as Ag Head of Zoology Unit, P.N. Idachaba (Abuja branch) Ag Head of Crop Science Laboratory, Prof Sylvester Ogbogu (Ile-Ife branch & National Treasurer) Head of Department in OAU, Ile-Ife for 3 years w.e.f July 2014. In Yola/Jalingo/Mubi branch, we have many appointments as Heads of Department viz: Dr (Mrs) Rabecah S. Naphtali - HOD Zoology; Sunday C.

Samuel, HOD Crop Sci.; Oaya C. Samuel, HOD Agric Technology; Dr, M.M. Degri, HOD Agronomy and their branch chairman Dr (Mrs) A.M. Malgwi Associate professor, elected internal member of the Governing Council of MAUTECH.

I congratulate you all on behalf of Council and members of ESN. It is heart-warming to learn that Dr Samson Oladipo Okunade of Kano branch relocated to NSPRI headquarters in Ilorin.

On a sad note, however the Society lost some eminent members. First is Professor Oba Oyidi of IA & R Zaria. He was a founding member of the Society and he specialized in grasshoppers and Locusts. He was buried 15 July, 2014 at Ogiri in Kogi State. ESN was represented and condolences sent. Mr S.O. Dina (Ibadan branch) a foremost entomologist and former secretary of Ibadan branch passed on 12 Dec. 2013 buried 24 Jan. 2013 at IAR & T Moor Plantation, Ibadan. ESN sent condolences and was adequately represented at the burial. Donald Ukeh (Calabar/Uyo branch) on sabbatical leave at University of Agriculture Makurdi died in an accident 16 Jan 2014. Condolences were sent and ESN represented in the burial. A. J. Akpan, a curator from PH/Yenagoa branch died 3 July 2013 and was buried 22 March 2014. Condolences sent to the family. Prof Banjo (Abeokuta branch) died 3 November 2013 and buried 15 November, Condolences sent.

The following members lost their dear ones and we share your grief Prof S. N. Okiwelu

(PH/Yenagoa branch) lost the younger brother (Felix O. Okiwelu) on Friday 23 May 2014. He was buried 2nd August 2014. Condolences were sent. Mother of Prof W. Makanjuola (Chairman Lagos branch) died and was buried Friday 31 Jan 2014. ESN sent condolences. Prof. F.A. Ajayi buried *his* mother-in-law and ESN was represented by the National Secretary, N.E.S. Lale, CO. Adedire and two branch members from Akure were *in* the burial ceremony.

May their souls rest in peace.

Conclusion

Finally, permit me to inform you that since the last Conference, Council has met four (4) times at Yenagoa (7 Oct. 2013) Bida/Badeggi (22 March 2014), Awka (19 July 2014) and Abuja (7/10/14). I would like to thank the elders and fellow entomologists of the Society for your encouragement and cooperation and for tolerating my shortcomings.

In all I have done, I consulted widely. I am wiser now because whoever walks with the wise becomes wiser. Without deliberation, plans come to nothing and where counsellors are many, plans succeed. If you want to know the road ahead, ask those coming back.

Let me appreciate the chief host of this conference i.e. the Vice-Chancellor of University of Abuja, Prof M. U. Adikwu FSTAN, FPSN; the special guests of honour - the Hon. Minister Federal Ministry of Agriculture and Rural Development (Dr Akinwumi Ayo Adesina); the honourable Minister Federal Ministry of Science and Technology (Dr Bulama); the keynote address presenter, Prof

Hayward B. Mafuyai, Vice-Chancellor University of Jos. I thank the presenters of symposium and Special papers.

The LOC members of this Conference (led by Dr Oyerinde) have my profound regard for all the efforts they have made to bring us to Abuja notwithstanding EVD and insecurity threats. However good or bad a situation is, it will change.

Thank you fellow entomologists and participants for coming to this conference.

Professor Dan A. Enobakhare, FESN, KSM
National President 2012 - date



***Helicoverpa armigera* HUBNER [LEPIDOPTERA: NOCTUIDEA]: A COSMOPOLITAN AND POLYPHAGOUS PESTS OF MANY TROPICAL AND SUB-TROPICAL CROPS**

ANNA M. MALGWI (PH.D) READER,
 Department of Crop Protection,
 Modibbo Adama Univ. Of Tech. (former F.U.T.), Yola
 Adamawa State, Nigeria.
 National ESN Treasurer And Pioneer
 Chairperson ESN (Yola/Jalingo/Mubi Branch)



MATURED LARVAE

Scientific classification

Kingdom: [Animalia](#)
 Phylum: [Arthropoda](#)
 Class: [Insecta](#)
 Order: [Lepidoptera](#)
 Family: [Noctuidae](#)
 Genus: [Helicoverpa](#)
 Species: *H. armigera*

Binomial name

Helicoverpa armigera
 (Hübner, [1809])

Distribution: This species is widespread in central and southern Europe, temperate Asia, Africa, Australia and Oceania, and has also recently been confirmed to have successfully invaded Brazil. It is a migrant species, able to reach Scandinavia and other northern territories. The **cotton bollworm**, **corn earworm** or **Old World (African) bollworm**, *Helicoverpa armigera*, (also known as the **scarce**



MATURED ADULT AND COMPLETE LIFE CIRCLE H. Armigera

SYNONYMS

- *Chloridea armigera* Hübner,
- *Chloridea obsoleta* Duncan & Westwood, 1841
- *Helicoverpa commoni* Hardwick, 1965
- *Helicoverpa obsoleta* Auctorum,
- *Heliothis armigera* Hübner, 1805
- *Heliothis conferta* Walker, 1857
- *Heliothis fusca* Cockerell, 1889
- *Heliothis pulverosa* Walker, 1857
- *Heliothis rama* Bhattacharjee & Gupta, 1972
- *Heliothis uniformis* Wallengren, 1860
- *Noctua armigera* Hübner, [1805]
- *Noctuabarbara* Fabricius, 1794

bordered straw in the UK, where it is an immigrant) is a **moth**, the larvae of which feed on a wide range of plants, including many important cultivated crops. It is a major pest in cotton and one of the most **polyphagous** and **cosmopolitan** pest species. It should not be confused with the similarly named, related species *Helicoverpa zea*.

Life History

THE EGGS are spherical, 0.4 to 0.6 mm in diameter and have a costate surface. They are white, later becoming greenish.

THE LARVAE takes 13 to 22 days to develop, reaching up to 40 mm long in the sixth **instar**. Their colouring is variable but mostly greenish and yellow to red-brown. The head is yellow with several spots. Three dark

