Serangga 8(1–2): 107-111
ISSN 1394–5130, Pusat Sistematik Serangga, UKM

LIST OF TERMITE (INSECTA: ISOPTERA) FROM AN EX-FELLED PEAT SOIL OIL PALM PLANTATION NEAR ENDAU-ROMPIN FOREST RESERVE

Faszly, R., Idris, A.B., Sajap, A.S. *, Norman, K. ** & Mohd. Basri, W. **
School of Environmental & Natural Resource Sciences
Faculty of Science & Technology
University Kebangsaan Malaysia,
43600 Bangi, Selangor.

***** Department of Forest Management
Faculty of Forestry, University Putra Malaysia,
43400 Serdang, Selangor.

****** Biological Research Division, Malaysian Palm Oil Board
P.O. Box 10620, 50720 Kuala Lumpur.

ABSTRACT

Twenty species of termite were collected from peat soil areas of Ladang Yayasan Pahang Endau Rompin, an oil palm plantation near the Endau Rompin Reserve, Peninsular Malaysia.

ABSTRAK

Dua puluh spesies anai-anai telah dikutip dari kawasan tanah gambut Ladang Yayasan Pahang Endau Rompin, sebuah ladang

sawit berhampiran Taman Negara Endau Rompin, Semenanjung Malaysia.

INTRODUCTION

This paper presents a list of termites collected through transect sampling in deep and shallow peat soil areas of Ladang Yayasan Pahang Endau Rompin (2º36'N, 103º32'E), an advancing plantation converted after a logged forest near the Endau Rompin Forest Reserve, east of Peninsular Malaysia. In Malaysia, termites (Insecta: Isoptera) are becoming an important pest of oil palm in peat plantations and that control strategies need to be developed (Sudharto et al. 1991; Khoo et al. 1991; Zulkefli et al. 2000; Khoo et al. 2001; Lim & Silek 2001). To have effective control strategies termite species needs to correctly identified and verified as different species of termites might inhabit different plantations (Khoo *et al.*, 2001) and that their ecology and behaviour also varies.

The study was conducted by using belt transects following method used by De Souza and Brown (1994) and Jones and Eggleton (2000). Transects were set up in six replicates in which three each in deep and shallow peat plantation blocks. Sampling was done in 12 days (two days for each transects) between 0800h to 1200h in October and November 2001. Identification of the species was based on the soldier termite individuals collected from each collection centre following Thapa (1981) and Tho (1992).

The specimens collected are wet stored in vials with 80% ethanol (Roonwal 1970) and deposited in the Centre for Insects Systematic, University Kebangsaan Malaysia, Bangi (UKM) and Entomology Laboratory 1, Biology Division, Malaysian Palm Oil Board, Bangi (MPOB). There were three major families consisting of five subfamilies and 20 species (see list below).

Family Kalotermitidae

Subfamily Kalotermitinae

Glyptotermes brevicaudatus (Haviland)

Family Rhinotermitidae

Subfamily Coptotermitinae

Coptotermes curvignathus (Holmgren)
Coptotermes sepangensis Krishna
Coptotermes havilandi (Holmgren)
Coptotermes sp. 1*
Coptotermes sp. 2**

Subfamily Rhinotermitinae

Parrhinotermes aequalis (Haviland)
Schedorhinotermes sarawakensis (Holmgren)
Schedorhinotermes malaccensis (Holmgren)
Schedorhinotermes medioobscurus (Holmgren)
Schedorhinotermes sp. 1***

Family Termitidae

Subfamily Termitinae

Globitermes globosus (Haviland)
Microcerotermes serrula (Desneux)
Pericapritermes buitenzorgi (Kemner)
Pericapritermes semarangi (Kemner)
Pericapritermes sp. C (Tho)
Pericapritermes sp. D (Tho)

Subfamily Nasutitermitinae

Havilanditermes atripennis (Haviland)
Nasutitermes havilandi Haviland
Nasutitermes johoricus (John)

* The species exhibits several individual soldier castes' length of head to base of mandibles lesser than *Coptotermes curvignathus*

** The species exhibits several individual soldier castes' length of head to base of mandibles and the maximum width of head within a range much or lesser than *Coptotermes havilandi*

*** The species exhibits dimension of length of head to base of mandibles and the maximum width of head much lesser than *Schedorhinotermes medioobscurus*

ACKNOWLEDGEMENT

We appreciate the assistance of En. Izuan Ismail during the fieldwork in Ladang Yayasan Pahang, and to the management of Ladang Yayasan Pahang Endau Rompin. Thanks also go to the staffs of Entomology 1, MPOB and Centre for Insects Systematic, UKM for their helpful hands. Above all we thank the Director General of Malaysian Palm Oil Board (MPOB) for allocating this research as part of the Graduate Students Research Assistantship Scheme under Project no. BD 368-2001.

REFERENCES

De Souza, O.F.F & Brown, V.K. 1994. Effects of habitat fragmentation on Amazonian termite communities. *Journal of Tropical Ecology*. **10**: 197-206.

Jones, D.T. & Eggleton, P. 2000. Sampling termite assemblages in tropical forests: testing a rapid biodiversity assessments protocol. *Journal of Applied Ecology*. **37**: 191-203.

Khoo, K. C., Ooi, P.A.C. & Ho, C.T. 1991. *Crop pest and management in Malaysia*. Kuala Lumpur: Tropical Press. 242 pp.

Khoo, K.C., Lim, K.H., Singh, G. & Sharma, M. 2001. A comparative study of the species of termites and their distribution in fields of oil palm growing on peat and mineral soils. Abstract no. 144. In Proceeding – *The 4th Asia Pacific Conference of Entomology*, Kuala Lumpur, Malaysia, 14-17 August.

Lim, K.H. & Silek, B. 2001. Termite infestation on oil palm planted on deep peat in Sarawak: Tradewinds experience. In Proceeding. *2001 International Palm Oil Conference*, Kuala Lumpur, Malaysia, 20-22 August.

Roonwal, M.L. 1970. Termites of the Oriental region. In Krishna, K. & Weesner, F.M. (ed.) *Biology of Termites*. Vol. 2. pp 315 392. New York: Academic Press.

Sudharto, Ps., Sipayung, A. & de Chenon, R.D. 1991. Termites – a new problem on oil palm plantation in Indonesia. In Proceeding. *1991 PORIM International Palm Oil Conference – Agriculture*: 407-417.

Thapa, R.S. 1981. *Termites of Sabah*. Sabah Forest Record No. 12. Kota Kinabalu: Chin Chi Printing Works Sdn. Bhd. 374 pp.

Tho, Y.P. 1992. *Termites of Peninsular Malaysia*. Malayan Forest Record No. 36. Kepong: Forest Research Institute of Malaysia. 224 pp.

Zulkefli, M.D., Tayeb, D.M. & Roslan, A. 1996. Experience on peat development for oil palm planting in PORIM peat research station, Sessang, Sarawak. Technical paper 5. pp 42-46. In Proceeding. *1996 Seminar on Prospects of Oil Palm Planting on Peat in Sarawak: "The Golden Opportun*