

ACKNOWLEDGEMENTS

We are grateful to James W Jones, Chief of the Department of Entomology, Armed Forces Research Institute of Medical Sciences, Bangkok, for his encouragement, support, and for reviewing the manuscript, and to Richard C Wilkerson, Walter Reed Biosystematics Unit, Smithsonian Institution, Washington, DC, for reviewing the manuscript. We thank all of our colleagues who collected the specimens used in this study, particularly those at AFRIMS and Mahidol University.

REFERENCES

- Amerasinghe PH, Amerasinghe FP, Wirtz RA, et al. Malaria transmission by *Anopheles subpictus* (Diptera: Culicidae) in a new irrigation project in Sri Lanka. *J Med Entomol* 1992; 29: 577-81.
- Anigstein L. Malaria and Anophelines in Siam. *Q Bull Health Org* 1932; League of Nations 1: 233-306.
- Baimai V, Andre RG, Harrison BA, Kijchalao U, Panthusiri L. Crossing and chromosomal evidence for two additional species within the taxon *Anopheles dirus* Peyton and Harrison (Diptera: Culicidae) in Thailand. *Proc Entomol Soc Wash* 1984a; 89: 157-66.
- Baimai V, Green C, Andre RG, Harrison BA, Peyton EL. Cytogenetic studies of some species complexes of *Anopheles* in Thailand and Southeast Asia. *Southeast Asian J Trop Med Public Health* 1984b; 15: 536-46.
- Baimai V, Harbach RE, Kijchalao U. Cytogenetic evidence for a fifth species within the taxon *Anopheles dirus* in Thailand. *J Am Mosq Control Assoc* 1988a; 4: 333-8.
- Baimai V, Harbach RE, Sukowati S. Cytogenetic evidence for the two species within the current concept of the malaria vector *Anopheles leucosphyrus* in Southeast Asia. *J Am Mosq Control Assoc* 1988b; 4: 44-50.
- Baimai V. Population cytogenetics of the malaria vector *Anopheles leucosphyrus* group. *Southeast Asian J Trop Med Public Health* 1988c; 19: 667-80.
- Baimai V. Constitutive heterochromatin differentiation and evolutionary divergence of karyotype in Oriental *Anopheles* (*Cellia*). *Pac Sci* 1988d; 42: 13-47.
- Baimai V, Rattanarithikul R, Kijchalao U. Metaphase karyotypes of *Anopheles* of Thailand and Southeast Asia: I. The Hyrcanus Group. *J Am Mosq Control Assoc* 1993a; 9:

59-67.

Baimai V, Kijchalao U, Rattanarithikul R, Green CA. Metaphase karyotype of *Anopheles* of Thailand and Southeast Asia: II. Maculatus Group, Neocellia Series, subgenus *Cellia*. *Mosq Syst* 1993b; 25: 116-23.

Baimai V, Treesucon A, Rattanarithikul R. Metaphase karyotypes of *Anopheles* of Thailand and Southeast Asia: III. The Neocellia Series (*Cellia*). *Mosq Syst* 1994; 26: 116-24.

Baimai V, Rattanarithikul R, Kijchalao U. Metaphase Karyotypes of *Anopheles* of Thailand and Southeast Asia: IV. The Barbirostris and Umbrosus species groups, subgenus *Anopheles* (Diptera: Culicidae). *J Am Mosq Control Assoc* 1995; 11: 323-8.

Baimai V, Kijchalao U, Rattanarithikul R. Metaphase Karyotypes of *Anopheles* of Thailand and Southeast Asia: V. The Myzomyia Series, subgenus *Cellia* (Diptera: Culicidae). *J Am Mosq Control Assoc* 1996a; 12: 97-105.

Baimai V, Kijchalao U, Rattanarithikul R. Metaphase karyotypes of *Anopheles* of Thailand and Southeast Asia: VI. The Pyretophorus and the Neomyzomyia Series, subgenus *Cellia* (Diptera: Culicidae). *J Am Mosq Control Assoc* 1996b; 12: 669-75.

Baker EZ, Beier JC, Meek SR, Wirtz RA. Detection and quantification of *Plasmodium falciparum* and *P. vivax* infections in Thai Kampuchean *Anopheles* (Diptera: Culicidae) by enzyme linked immunosorbent assay. *J Med Entomol* 1987; 24: 537-41.

Banerjee K, Deshmukh PK, Ilkal MA, Dhanda V. Experimental transmission of Japanese encephalitis virus through *Anopheles tessellatus* and *Culex fatigans* mosquitoes. *Indian J Med Res* 1977; 65: 746-52.

Barnes ME. Notes on the anopheline mosquitoes of Siam. *Am J Hyg* 1923a; 3: 121-6.

Barnes ME. Anopheline mosquitoes with special reference to the species found in Siam. *J Nat Hist Soc Siam* 1923b; 6: 65-79.

Barraud PJ, Christophers SR. On a collection of anopheline and culicine mosquitoes from Siam. *Rec Malar Surv India* 1931; 2: 269-85.

Bonne-Wepster, Swellengrebel NH. The anopheline mosquitoes of the Indo-Australian Region. Amsterdam: JH De Bussy, 1953; 504 pp.

Causey OR. Some anopheline and culicine mosquitoes of Siam with remarks on malarial control in Bangkok. *Am J Hyg Monogr Ser* 1937a; 25: 400-20.

Causey OR. New anopheline and culicine mosquitoes from Siam. *J Parasitol* 1937b; 23: 543-5.

- Chareonviriyaphap T, Aum-Aung B, Ratanatham S. Current insecticide resistance patterns in mosquito vectors in Thailand. *Southeast Asian J Trop Med Public Health* 1999; 30: 131-41.
- Chareonviriyaphap T, Bangs MY, Rattanatham S. Status of malaria in Thailand. *Southeast Asian J Trop Med Public Health* 2000; 31: 225-37.
- Chen B, Butlin RK, Harbach RE. Molecular phylogenetics of the Oriental members of the Myzomyia Series of *Anopheles* subgenus *Cellia* (Diptera: Culicidae) inferred from nuclear and mitochondrial DNA sequences. *Syst Entomol* 2003; 28: 57-67.
- Chen B, Harbach RE, Butlin RK. Molecular and morphological studies on the *Anopheles minimus* group of mosquitoes in southern China: taxonomic review, distribution and malaria status. *Med Vet Entomol* 2002; 16: 253-65.
- Cheong WH, Omar AH. *Anopheles maculatus*, a new vector of *Wuchereria bancrofti* in Malaysia (Pulau Aur) and a potential vector on mainland Malaya. *Med J Malaya* 1965; 20: 74-5.
- Christophers SR. The fauna of British India, including Ceylon and Burma. Diptera. Family Culicidae. Tribe Anophelini. London: Taylor and Francis, 1933; 5: 371 pp.
- Coleman RE, Sithiprasasna R, Kankaew P, et al. Naturally occurring mixed infection of *Plasmodium vivax* VK210 and *P. vivax* VK247 in *Anopheles minimus* and *An. maculatus* (Diptera: Culicidae) in western Thailand. *J Med Entomol* 2002; 39: 556-9.
- Colless DH. The *Anopheles leucosphyrus* group. *Trans R Entomol Soc London* 1956; 108: 37-116.
- Colless, DH. Further notes on the systematics of the *Anopheles leucosphyrus* group (Diptera: Culicidae). *Proc R Entomol Soc London* 1957; 26: 131-9.
- Delorme DE, Wirtz RA, Loong KP, Lewis GE Jr. Identification of sporozoites in *Anopheles maculatus* from Malaysia by enzyme-linked immunosorbent assays. *Trop Biomed* 1989; 6: 21-6.
- Dhanda V, Thenmozhi V, Kumar NP, et al. Virus isolation from wild-caught mosquitoes during a Japanese encephalitis outbreak in Kerala in 1996. *Indian J Med Res* 1997; 106: 4-6.
- Dhir SL. A focal outbreak of malaria in Delhi in 1969. *J Commun Dis* 1969; 1: 195-202.
- Elias M, Rahman AJMM, Ali MM, Begum J, Chowdhury AR. The ecology of malaria carrying mosquito *Anopheles philippinensis* Ludlow and its relation to malaria in

- Bangladesh. *Bangladesh Med Res Counc Bull* 1987; 13: 15-28.
- Faver EM, Barnish G, Yamokgul P, Rooney W. Sensitivity *in vitro* of *Plasmodium falciparum* to three currently used antimalarial drugs on the western border of Thailand. *Trans R Soc Trop Med Hyg* 1999; 93: 180-4.
- Garros C, Harbach RE, Manguin S. Systematics and biogeographical implications of the phylogenetic relationships between members of the Funestus and Minimus groups of *Anopheles* (Diptera: Culicidae). *J Med Entomol* 2004; 42: 7-18.
- Garros C, Harbach RE, Manguin S. Morphological assessment and molecular phylogenetics of the Funestus and Minimus Groups of *Anopheles* (*Cellia*). *J Med Entomol* 2005; 42: 522-36.
- Ghosh KK, Chakraborty S, Bhattacharya S, Palit A, Tandon N, Hati AK. *Anopheles annularis* as a vector of malaria in rural West Bengal. *Indian J Malariaol* 1985; 22: 65-9.
- Gingrich J, Weatherhead A, Sattabongkot J, Pilakasiri C, Wirtz RA. Hyperendemic malaria in a Thai village: dependence of year-round transmission on focal and seasonally circumscribed mosquito (Diptera: Culicidae) habitats. *J Med Entomol* 1990; 27: 1016-26.
- Gould DJ, Esah S, Pranith U. Relation of *Anopheles aconitus* to malaria transmission in the central plain of Thailand. *Trans R Soc Trop Med Hyg* 1967; 61: 441-2.
- Green CA. Population genetical studies in the genus *Anopheles*. Johannesburg: University of the Witwatersrand, 1982; 107 pp. Ph.D. Thesis.
- Green CA, Harrison BA, Klein TA, Baimai V. Cladistic analysis of polytene chromosome rearrangements in anopheline mosquitoes, subgenus *Cellia*, series Neocellia. *Canad J Genet Cytol* 1985; 27: 123-33.
- Green CA, Gass RF, Munsterman LE, Baimai V. Population genetic evidence for 2 species in *Anopheles minimus* in Thailand. *Med Vet Entomol* 1990; 4: 25-34.
- Green CA, Rattanarithikul R, Pongparit S, Sawadwongporn P, Baimai V. A newly recognized vector of human malaria parasites in the Oriental region, *Anopheles (Cellia) pseudowillmori* (Theobald, 1910). *Trans R Soc Trop Med Hyg* 1991; 85: 35-6.
- Green, CA, Rattanarithikul R, Charoensub A. Population genetic confirmation of species status of the malaria vectors *Anopheles willmori* and *An. pseudowillmori* in Thailand and chromosome phylogeny of the Maculatus group of mosquitoes. *Med Vet Entomol*

- 1992; 6: 335-41.
- Harbach RE, Knight KL. Taxonomists' glossary of mosquito anatomy. Marlton, NJ: Plexus Publishing, 1980; 415 pp.
- Harbach RE, Knight KL. Corrections and additions to taxonomists' glossary of mosquito anatomy. *Mosq Syst* 1982; 13: 201-17.
- Harbach RE, Gingrich JB, Pang LW. Some entomological observations on malaria transmission in a remote village in northwestern Thailand. *J Am Mosq Control Assoc* 1987; 3: 296-301.
- Harbach RE. The classification of genus *Anopheles* (Diptera: Culicidae): a working hypothesis of phylogenetic relationships. *Bull Entomol Res* 2004; 94: 537-53.
- Harbach RE, Rattanarithikul R, Harrison BA. *Baimaia*, a new subgenus for *Anopheles kyondawensis* Abraham, a unique crabhole-breeding anopheline in Southeast Asia. *Proc Entomol Soc Wash* 2005; 107: 750-61.
- Harbach RE, Parkin E, Chen B, Buttin RK. *Anopheles (Cellia) minimus* Theobald (Diptera: Culicidae): Neotype designation, characterization, and systematics. *Proc Entomol Soc Wash* 2006; 108: 198-209.
- Harinasuta C, Sucharit S, Vutikes S. Experimental studies on potential mosquito vectors of bancroftian filariasis. *Southeast Asian J Trop Med Public Health* 1971; 2: 102-3.
- Harinasuta T, Gilles HM, Sandosham AA. Malaria in Southeast Asia. *Southeast Asian J Trop Med Public Health* 1976; 7: 645-78.
- Harrison BA. A new interpretation of affinities within the *Anopheles hyrcanus* complex in Southeast Asia. *Mosq Syst* 1972; 4: 73-83.
- Harrison BA, Scanlon JE. Medical entomology studies: II. The subgenus *Anopheles* in Thailand (Diptera: Culicidae). *Contrib Am Entomol Inst* (Ann Arbor) 1975; 12: 1-307.
- Harrison BA. Medical entomology studies: XIII. The Myzomyia Series of *Anopheles (Cellia)* in Thailand, with emphasis on intra-interspecific variations (Diptera: Culicidae). *Contrib Am Entomol Inst* (Ann Arbor) 1980; 17: 1-195.
- Harrison BA, Rattanarithikul R, Peyton EL, Mongkolpanya K. Taxonomic changes, revised occurrence records and notes on the Culicidae of Thailand and neighboring countries. *Mosq Syst* 1990; 22: 196-227.
- Iyengar MOT. Filaria in Thailand. *Bull WHO* 1953; 9: 731-66.
- Junkum A, Komalamisra N, Jitpakdi A, et al. Evidence to support two conspecific cytological races of *Anopheles aconitus* in Thailand. *J Vector Ecol* 2005; 30: 213-24.

- Khoon CC. Status of malaria vectors in Malaysia. *Southeast Asian J Trop Med Public Health* 1985; 16: 133-8.
- Kirnowardoyo S. Status of *Anopheles* malaria vectors in Indonesia. *Southeast Asian J Trop Med Public Health* 1985; 16: 129-32.
- Kittayapong P, Clark JM, Edman JE. Survey of the *Anopheles maculatus* complex (Diptera: Culicidae) in peninsular Malaysia by analysis of cuticular lipids. *J Med Entomol* 1993; 30: 969-74.
- Kittayapong P, Edman JD, Harrison BA, Delorme DR. Female body size, parity, and malaria infection of *Anopheles maculatus* (Diptera: Culicidae) in peninsular Malaysia. *J Med Entomol* 1992; 29: 379-83.
- Knight KL. A new *Aedes (Finlaya)* mosquito from Thailand. *Mosq Syst* 1978; 10: 106-16.
- Knight KL, Stone A. A catalog of the mosquitoes of the world (Diptera: Culicidae). 2nd ed. *Thomas Say Found, Entomol Soc Am* 1977; 6: 1-611.
- Ksiazek TG, Trosper JH, Cross JH, Basaca-Sevilla V. Additional isolations of Japanese encephalitis virus from the Philippines. *Southeast Asian J Trop Med Public Health* 1980; 11: 507-9.
- Lee VH, Atmoedojo S, Rusmiarto S, Aep S, Semendra W. Mosquitoes of Bali Island, Indonesia; Common species in the village environment. *Southeast Asian J Trop Med Public Health* 1983; 14: 298-307.
- Lekagul B, McNeely JA. Mammals of Thailand. Bangkok: Assoc Conserv Wildl 1988: 758 pp.
- Linton YM, Harbach RE, Chang MS, Anthony TG, Matusop A. Morphological and molecular identity of *Anopheles (Cellia) sundaicus* (Diptera: Culicidae), the nominotypical member of a malaria vector species complex in Southeast Asia. *Syst Entomol* 2001; 26: 357-66.
- Linton YM, Dusfour I, Howard TM, et al. *Anopheles (Cellia) epiroticus* (Diptera: Culicidae), a new malaria vector species in the Southeast Asian Sundaicus Complex. *Bull Entomol Res* 2005; 95: 329-39.
- Maheswary NP, Habib MA, Elias M. Incrimination of *Anopheles aconitus* Doenitz as a vector of epidemic malaria in Bangladesh. *Southeast Asian J Trop Med Public Health* 1992; 13: 798-801.
- Mourga DT, Ilkal MA, Mishra AC, et al. Isolation of Japanese encephalitis virus from mosquitoes collected in Karnataka state, India from 1985 to 1987. *Trans R Soc Trop Med*

- Hyg* 1989; 83: 550-2.
- Nurul Huda KN, Harrison BA. Priority of the name *Anopheles pseudojamesi* for the species previously called *An. ramsayi* (Diptera: Culicidae). *Mosq Syst* 1985; 17: 49-51.
- Olson JG, Ksiazek TG, Lee VH, Tan R, Shope RE. Isolation of Japanese encephalitis virus from *Anopheles annularis* and *Anopheles vagus* in Lombok, Indonesia. *Trans R Soc Trop Med Hyg* 1985; 79: 845-7.
- Panyim S, Yasothornsrikul S, Baimai V, Rosenberg R, Andre RG, Green CA. Identification of isomorphic malaria vectors using a DNA probe. *Am J Trop Med Hyg* 1988; 38: 47-9.
- Peyton EL, Scanlon JE. Illustrated key to the female *Anopheles* mosquitoes of Thailand. Bangkok: US Army Medical Component, Southeast Asia Treaty Organization, 1966: 47 pp.
- Peyton EL, Harrison BA. *Anopheles (Cellia) dirus*, a new species of the Leucosphyrus Group from Thailand (Diptera: Culicidae). *Mosq Syst* 1979; 11: 40-52.
- Peyton EL, Ramalingam S. *Anopheles (Cellia) nemophilous*, a new species of the Leucosphyrus group from peninsular Malaysia and Thailand (Diptera: Culicidae). *Mosq Syst* 1988; 20: 272-99.
- Peyton EL. A new classification for the Leucosphyrus group of *Anopheles (Cellia)*. *Mosq Syst* 1990; 21: 197-205.
- Pinichpongse S, Bullner GR. The current status of malaria entomology in Thailand. *Warasan Mal* 1967; 11: 43.
- Pradhan JN, Shrestha SL, Vaidya RG. Malaria transmission in high mountain valleys of west Nepal including first record of *Anopheles willmori* (James) as a third vector of malaria. *J Nepal Med Assoc* 1970; 8: 89-97.
- Prasittisuk C. Present status of malaria in Thailand. *Southeast Asian J Trop Med Public Health* 1985; 16: 141-5.
- Ramachandra Rao T. The anophelines of India. (Revised Edition). Malaria Research Center, Delhi: *Indian Council of Medical Research*, 1984; 518 pp.
- Rattananarithikul R, Harrison BA. An illustrated key to the *Anopheles* larvae of Thailand. Bangkok: US Army Medical Component, Southeast Asia Treaty Organization, 1973: 42 pp.
- Rattananarithikul R, Green CA. Formal recognition of the species of the *Anopheles maculatus* group (Diptera: Culicidae) occurring in Thailand including the description of two new

- species and a preliminary key to females. *Mosq Syst* 1986; 18: 246-78.
- Rattanarithikul R, Harbach RE. *Anopheles maculatus* (Diptera: Culicidae) from the type locality of Hong Kong and two new species of the Maculatus Complex from the Philippines. *Mosq Syst* 1990; 22: 160-83.
- Rattanarithikul R, Mongkolpanya K, Noigamol C, Chanaimongkol S, Mahapibul P, Nakngern S. Dry-season distribution of mosquito larvae in the bed of the Mekong River, north-western Thailand. *J Am Mosq Control Assoc* 1994; 10: 197-201.
- Rattanarithikul R, Panthusiri P. Illustrated keys to the medically important mosquitoes of Thailand. *Southeast Asian J Trop Med Public Health* 1994; 25 (suppl 1): 1-66.
- Rattanarithikul R, Green CA, Panyim S, Noigamol C, Chanaimongkol S, Mahapibul P. Larval habitats of malaria vectors around a transmission focus in northwestern Thailand. *J Am Mosq Control Assoc* 1995; 11: 428-33.
- Rattanarithikul R, Konishi E, Linthicum KJ. Detection of *Plasmodium vivax* and *Plasmodium falciparum* circumsporozoites antigen in anopheline mosquitoes collected in southern Thailand. *Am J Trop Med Hyg* 1996a; 54: 114-21.
- Rattanarithikul R, Konishi E, Linthicum KJ. Observations on the nocturnal biting activity and host preference of anophelines collected in southern Thailand. *J Am Mosq Control Assoc* 1996b; 12: 52-7.
- Rattanarithikul R, Linthicum KJ, Konishi E. Seasonal abundance and parity rates of *Anopheles* species in southern Thailand. *J Am Mosq Control Assoc* 1996c; 12: 75-83.
- Rattanarithikul R, Harrison BA, Panthusiri P, Coleman RE. Illustrated keys to the mosquitoes of Thailand I. Background; geographic distributions; List of genera, subgenera, and species; and a key to genera. *Southeast Asian J Trop Med Public Health* 2005; 36 (suppl 1): 1-80.
- Reid JA. A preliminary account of the forms of *Anopheles leucosphyrus* Doenitz (Diptera: Culicidae). *Proc R Entomol Soc London, Ser B Taxonomy* 1949; 18: 42-53.
- Reid JA. The *Anopheles umbrosus* group (Diptera: Culicidae). Part I. Systematics, with descriptions of two new species. *Trans R Entomol Soc London* 1950; 101: 281-318.
- Reid JA. The *Anopheles hyrcanus* group in Southeast Asia. *Bull Entomol Res* 1953; 44: 5-76.
- Reid JA. The *Anopheles barbirostris* group. *Bull Entomol Res* 1962; 53: 1-57.
- Reid JA, Knight KL. Classification within the subgenus *Anopheles* (Diptera, Culicidae). *Ann Trop Med Parasitol* 1961; 55: 474-88.

- Reid JA. Anopheline mosquitoes of Malaya and Borneo. *Stud Inst Med Res Malaya* 1968; 3: 1-520.
- Reinert JF. Revised list of abbreviations for genera and subgenera of Culicidae (Diptera) and notes on generic and subgeneric changes. *J Am Mosq Control Assoc* 2001; 17: 51-5.
- Rongnoparut P, Yaicharoen S, Sirichotpakorn N, Rattanarithikul R, Lanzaro GC, Linthicum KJ. Microsatellite polymorphism in *Anopheles maculatus*, a malaria vector in Thailand. *Am J Trop Med Hyg* 1996; 55: 589-94.
- Rongnoparut P, Yaicharoen S, Sirichotpakorn N, Rattanarithikul R, Linthicum KJ. Sequence heterogeneity in *Copia*-like retrotransposons in *Anopheles* (Diptera: Culicidae) in Thailand. *J Med Entomol* 1998; 35: 771-7.
- Rongnoparut P, Sirichotpakorn N, Rattanarithikul R, Yaicharoen S, Linthicum KJ. Estimates of gene flow among *Anopheles maculatus* populations in Thailand using microsatellite analysis. *Am J Trop Med Hyg* 1999; 60: 508-15.
- Rosenberg R, Andre RG, Somchit L. Highly efficient dry season transmission of malaria in Thailand. *Trans R Soc Med Hyg* 1990; 89: 22-8.
- Ryan JR, Dave K, Collins KM, et al. Extensive multiple test centre evaluation of Vec Test malaria antigen panel assay. *Med Vet Entomol* 2002; 16: 321-7.
- Saguna SG, Rathinam KG, Rajavel AR, Dhanda V. Morphological and chromosomal descriptions of new species in the *Anopheles subpictus* complex. *Med Vet Entomol* 1994; 9: 88-94.
- Sallum MAM, Peyton EL, Wilkerson RC. Six new species of the *Anopheles leucosphyrus* group, reinterpretation of *Anopheles elegans* and vector implications. *Med Vet Entomol* 2005; 19: 158-99.
- Sattabongkot J, Kiattibut C, Kumpitak C, et al. Evaluation of the Vec Test Malaria Antigen Panel assay for the detection of *Plasmodium falciparum* and *P. vivax* circumsporozoite protein in anopheline mosquitoes in Thailand. *J Med Entomol* 2004; 41: 209-14.
- Scanlon JE, Peyton EL, Gould DJ. An annotated checklist of the *Anopheles* of Thailand. *Thai Natl Sci Pap Fauna Ser* 1968; 2: 1-35.
- Scanlon JE, Sandhinand U. The distribution and biology of *Anopheles balabacensis* in Thailand. *J Med Entomol* 1965; 2: 61-9.
- Snounou G, Viriyakosol S, Jarra W, Thaithong S, Brown KN. Identification of the four malaria parasite species in field samples by the polymerase chain reaction and de-

- tection of a high prevalence of mixed infections. *Mol Biochem Parasitol* 1993; 58: 283-92.
- Somboon P, Suwonakerd W, Lines JD. Susceptibility of Thai zoophilic anophelines and suspected malaria vectors to local strains of human malaria parasites. *Southeast Asian J Trop Med Public Health* 1994; 25: 766-70.
- Somboon P, Aramrattana A, Lines J, Webber R. Entomological and epidemiological investigations of malaria transmission in relation to population movements in forest areas of north-west Thailand. *Southeast Asian J Trop Med Public Health* 1998; 29: 3-9.
- Subbarao SK. The *Anopheles culicifacies* complex and control of malaria. *Parasitol Today* 1988; 4: 72-5.
- Sucharit S, Komalamisra N, Leemingsawat S, Apiwathnasorn C, Thongrungkiat S. Population genetic studies on the *Anopheles minimus* complex in Thailand. *Southeast Asian J Trop Med Public Health* 1988; 19: 7-23.
- Sucharit S, Surathin K, Shrestha SR. Vectors of Japanese encephalitis virus (JEV): species complexes of the vectors. *Southeast Asian J Trop Med Public Health* 1989; 20: 611-21.
- Sukowati S, Baimai V, Harun S, Dasuki Y, Andris H, Efriwati M. Isozyme evidence for three sibling species in the *Anopheles sundaicus* complex from Indonesia. *Med Vet Entomol* 1999; 13: 408-14.
- Sungvornyothin S, Garros S, Chareonviriyaphap T, Manguin S. How reliable is the humeral pale spot for identification of cryptic species of the Minimus Complex? *J Am Mosq Control Assoc* 2006; 22: (in press).
- Suvannadabba S. Current status of filariasis in Thailand. *Southeast Asian J Trop Med Public Health* 1993; 24 (suppl 2): 5-7.
- Suwonakerd W, Amg-Ang B, Rimwangtrakul K. A field study on the response of *Anopheles dirus* to DDT and fenitrothion sprayed to huts in Phetchaboon Province, Thailand. *Trop Med* 1990; 32: 1-5.
- Tanaka K. Studies on the pupal mosquitoes of Japan (9) Genus *Lutzia*, with establishment of two new subgenera, *Metalutzia* and *Insulalutzia* (Diptera: Culicidae). *Jpn J Syst Entomol* 2003; 9: 159-69.
- Theobald FV. Monograph of the Culicidae or mosquitoes. Vol V. London: British Museum of Natural History, 1910: 646 pp.
- Thurman EB. A contribution to a revision of the Culicidae of northern Thailand. *Univ MD*

- Agric Exp Stn Bull A* 1959: 100 pp.
- Van Bortel W, Trung HD, Manh ND, Roelants P, Verle P, Coosemans M. Identification of two species within the *Anopheles minimus* complex in northern Vietnam and their behavioural divergences. *Trop Med Int Health* 1999; 4: 257-65.
- Wattal BL. Dissection records of wild caught anopheline mosquitoes other than the reported vectors of malaria "Vectors of malaria in India". *Nat Soc Ind Mal Mosq Dis* 1961; 1: 187-237.
- Wharton RH. Studies on filariasis in Malaya. Field and laboratory investigations of the vectors of a rural strain of *Wuchereria bancrofti*. *Ann Trop Med Parasitol* 1960; 54: 78-91.
- Wilkerson RC, Peyton EL. Standardized nomenclature for the costal wing spots of the genus *Anopheles* and other spotted wing mosquitoes (Diptera: Culicidae). *J Med Entomol* 1990; 27: 207-24.
- Zhang HL. The natural infection rate of mosquitoes by Japanese encephalitis B virus in Yunnan Province. *Zhonghua Yu Fang Yi Xue Za Zhi* 1990; 24: 265-7.