Notes on the Early Exploration and Botanical Collecting in the Endau-Rompin Area of Peninsular Malaysia

K.M. WONG¹, Y.S. WONG² and L.G. SAW³

¹Forestry Department, Bandar Seri Begawan 2067, Brunei Darussalam

²Malayan Nature Society, 485 Jalan 5/53

46000 Petaling Jaya, Selangor, Malaysia

³Forest Research Institute of Malaysia,

Kepong, Selangor, Malaysia

Abstract

The earliest scientific expeditions to the Endau area of Peninsular Malaysia were those by J.R. Logan (1847), N.N. Miklucho-Maclay (1874, 1875), D.F.A. Hervey (1879) and H.W. Lake (1891), although the first documented botanical collections from the area were made in 1892 by H.J. Kelsall during his visit with Lake. Kelsall's collecting localities included Gunung Janing and the Semberong River. Subsequent botanical visits to the area were made by personnel of the Forest Department of the Straits Settlements and Federated Malay States during the 1920s and 1930s and later by botanists and staff based at the Forest Research Institute at Kepong, the Singapore Botanic Gardens and the University of Malaya. A list is given of these collectors and those during expeditions organised to the Endau-Rompin area by the Malayan Nature Society in 1985–86, their collecting localities and periods. Mention is also made of the herbaria where these collections are curated. This information is presented as a background to future attempts at compiling resource inventories for the Endau-Rompin area, a significant portion of which is being proposed for conservation.

Introduction

Much scientific work has been carried out during the Malayan Nature Soceity's Malaysian Heritage and Scientific Expedition of 1985–86 to the Endau-Rompin area, where a significant portion of the Endau River basin is being proposed for conservation. In spite of this, it is not yet possible to provide a detailed inventory of the flora of the area, which will be important for management purposes. Botanical studies of the area began in the 19th century and a great many visits have been made to the area since then. This account brings together information on early exploratory visits to the area and the numerous recent botanical surveys carried out there until the end of the Expedition in June 1986, as a background for a comprehensive inventory of the flora in the future.

Early Scientific Visitors to the Endau Basin

The first scientific explorations of the Endau area took place in the 19th century when much of the Malay Peninsula was still poorly mapped. Skinner (1878), discussing the progress made in the geography of the Malay Peninsula, wrote in the Journal of the Straits Branch of the Royal Asiatic Society: "Of these ... journey's [sic!] so important to our Cartography, some record should here be made; more especially as no account of them has been published in a permanent or generally accessible form ... But it would be invidious not to refer also to certain earlier journeys, viz., that

... of Mr. Logan (via Singapore, Indau, Semrong, Blumut, and Johore in 1847 ..." James Richardson Logan was a Scotsman and Barrister-at-Law, based in Penang and Singapore much of the time and interested in both geology and ethnology. He also founded the Journal of the Indian Archipelago and Eastern Asia, in which he wrote much about the livelihood of the Jakun people of Johore (Thomson 1881). His visit to the Endau River brought him only as far as its confluence with the Semberong River (some 15 km eastward from the boundary of the area presently proposed as the Endau-Rompin national park), and his exploration was mainly along the Semberong and southwards.

In 1874 the Russian geographer-ethnologist Nikolaj Nikolajewitsch Miklucho-Maclay undertook an exploration of epic proportions which brought him to the Endau River also. He set out on 15 December 1874, up the Muar River on the west coast of the Malay Peninsula, crossed southward to the Segamat River, made his way eastward to the Semberong River and went down the Endau River to the South China Sea. Thereafter he returned inland, explored the Kahang and Madek rivers, and continued southward along the Johor river to the Tebrau Straits which he reached on 2 February 1875 (Miklucho-Maclay 1875, 1878). In June 1875, Miklucho-Maclay embarked on a second journey, following his earlier course until the Endau-Semberong confluence, whence he travelled some 20 km further upriver on the Endau and climbed Gunong Janing (at the eastern boundary of the presently proposed Endau-Rompin park). However, he did not continue further up along the Endau, but instead turned seawards to the town of Pekan in Pahang, where he followed the Pahang river inland and emerged to Kota Baharu on the northeast coast, and finally inland again before arriving at the mouth of the Patani River. At this point, in October 1875, he was compelled to abandon the expedition because of the advancing monsoonal rains (Miklucho-Maclay 1878). Both Logan and Miklucho-Maclay appear not to have collected any botanical specimens from these journeys (van Steenis-Kruseman 1950).

Following this Dudley F.A. Hervey also visited the Endau area in August 1879, three years before he was to be Resident Councillor of Malacca (Hervey 1882). He travelled (presumably by sea) from Singapore to the mouth of the Endau River, and coursed along it only as far as where it met the Semberong River; he, too, turned southwards to explore the Semberong and its tributaries, the Kahang and the Madek, and made no further exploration of the Endau River itself. Hervey collected plants in his time, but appears not to have collected during his visit to the Endau-Semberong

area (Burkill 1927, van Steenis-Kruseman 1950).

Most familiar to botanists are Harry Lake, miner and surveyor, and H.J. Kelsall, who was a Lieutenant with the Royal Engineers in Singapore, because of the plant specimens collected on their journey. Lake began his exploration of the Endau River on 13 August 1891, on instruction from the Sultan of Johor, because the Endau was at the time poorly known and existing maps then showed the river to be comparatively small, with its source just a little beyond G. Janing. Lake traced the source of the Endau to a point about 44½ miles (about 72 km) upstream from the Endau-Semberong confluence, near the base of G. Besar, and crossed over to the headwaters of the Segamat River. He continued northward to the Jekati River and eventually emerged at Muar on the west coast in early October (Lake 1894). Lake's expedition appears to be the first documented crossing of the Malay Peninsula from east to west via the Endau River; however he did not collect any plant specimens.

Lake returned with Kelsall for another cross-peninsula expedition starting from Kuala Endau on 17 October 1892, but this time following a different route. They went upstream on the Endau only as far as the Lemakoh River (whence Kelsall ascended and collected plants on G. Janing), and returned to the Semberong River

which they followed upstream, eventually passing overland to the Bekok River and downstream to Batu Pahat on the west coast, which was reached on 5 November 1892 (Lake & Kelsall 1895). Kelsall collected plants on this expedition, mostly on the Semberong River, but these and his collections from G. Janing are important as reference material for the botany of the area. These specimens were presented to the herbarium of the Singapore Botanic Gardens where H.N. Ridley was able to name most of them (Lake & Kelsall 1895), and today these specimens are still curated in good condition at the herbarium there. The specimens were collected by Kelsall but are labelled "Lake and Kelsall's collections"; these specimens bear numbers that must have been given after the expedition because the numbers do not chronologically follow the dates of collection.

These are the pioneering scientific visits to the Endau area. Subsequent botanical visits to the area now proposed as the Endau-Rompin national park and its vicinity have not been well documented except through the plant specimens preserved in herbaria. In our discussions here of botanical collecting trips, the area of interest is taken as the proposed park area itself (about 45 km across at its widest east-west span) as well as a zone of about 15 km wide immediately surrounding the proposed park. The collecting localities of different collecting parties dealt with in this account are shown in Fig. 1; those localities visited before the Malayan Nature Society's 1985/1986 Endau-Rompin expedition are represented by symbols whereas collecting localities during the Society's expedition are represented by alphabets.

Twentieth-Century Visits: Before the 1985/86 Expedition

Probably the earliest botanical visit to the Endau-Rompin area this century was that of J.G. Watson and Yeob Abdul Rahim, of the Forest Department of the Straits Settlements and Federated Malay States, who in July 1923 collected plants along the Endau River east of Kuala Jasin. It was on this trip that Watson made the first collection of a riverbank shrub endemic to the Endau river basin and which was later named *Phyllanthus watsonii*, after him. Other early plant collectors who visited the area were mainly Forest Department staff, including Forest Guard Mohamud (at Sungai Kachah Putih, a tributary of the Rompin River, January 1930), Forest Guard Sudin (along the Sungai Anak Endau east of the proposed park area, March-November 1933), Forest Ranger Mohamed Said (Sungai Anak Endau, May 1935) and a number of other uniformed staff of the Forest Department (who each collected only one or several specimens on Gunung Lesong on the northern boundary of the proposed park area, April 1956).

Following this further botanical collections in the area were carried out by the

following parties:

K.M. Kochummen, F.S.P. Ng (Forest Botanists) of the Forest Research Institute (FRI) at Kepong, and Forestry students of the Forest Department, July 1964, in Labis Forest Reserve just southwest of the proposed park area;

K.M. Kochummen and T. Suppiah (Herbarium assistant) of the FRI at Kepong, April

1967, southwest of the proposed park area;

T.C. Whitmore (Colombo Plan Botanist at the FRI at Kepong), May 1967, Bukit

Peta and Sungai Endau in its vicinity;

P.F. Cockburn (British volunteer attached to the FRI at Kepong) and K. Ogata (botanist at the Tsukuba Forestry and Forest Products Research Institute), March-April 1968, Gunung Janing, Sungai Endau in its vicinity and Sungai Anak Endau;

P. Selvaraj (Herbarium assistant of the FRI at Kepong), November 1968, southwest of the proposed park area;

K.M. Kochummen, July and September 1970, southwest of the proposed park area; T.C. Whitmore, T. Suppiah and Samsuri Ahmad (plant collector at the Singapore Botanic Garden), February 1971, in the vicinity of Sungai Ulu Pukin and Sungai Jekatih on the west side of the proposed park area;

Y.C. Chan (Herbarium assistant of the FRI at Kepong), March 1972, southwest of the proposed park area; June 1972, in the vicinity of Sungai Jekatih northwest

of the proposed park area;

E.A. Heaslett (Singapore-based medical doctor and plant collector), Mohamad Shah (Herbarium assistant at the Singapore Botanic Garden), Ahmad Shukor and Samsuri Ahmad (plant collectors at the Singapore Botanic Garden), July 1972, Gunung Janing and Sungai Endau in its vicinity;

B.C. Stone (Botanist at the University of Malaya) and the Botany Class of 1973,

August 1973, Bukit Peta and Sungai Endau in its vicinity;

Mohamad Shah, November 1973, Gunung Lesong;

J. Dransfield (Botanist at the Royal Botanic Gardens, Kew), June 1977, Gunung Janing;

Y.C. Chan and Kamarudin Saleh (Herbarium assistants at the FRI at Kepong), June 1979, in the vicinity of Sungai Jekatih northwest of the proposed park area;

K.M. Wong (Forest Botanist, FRI at Kepong), T.D. Pennington (Botanist at the Royal Botanic Gardens, Kew) and Kamarudin Saleh, September-October 1981, Bukit Peta and Sungai Kemelai just east of the proposed park area.

The collections of Heaslett, Mohamad Shah, Ahmad and Samsuri (July 1972) and of Mohamad Shah (November 1973) are principally deposited in the Herbarium of the Singapore Botanic Gardens (SING), with duplicates distributed to the herbaria at the Forest Research Institute of Malaysia at Kepong (KEP) and the Royal Botanic Gardens at Kew (K). Ogata's collections are principally housed at the Tsukuba Forestry and Forest Products Research Institute with duplicates at KEP. Pennington's collections are housed at K, and also duplicated at KEP. The collections of Stone are deposited in part in the Herbarium of the University of Malaya (KLU) and in the herbarium of the Academy of Natural Sciences of Philadelphia (PH); those of the University of Malaya 1973 Botany students who accompanied Stone are deposited at KLU. All other collections are principally deposited at KEP with main duplicates

Figure 1. (See opposite page)

Achan (Mar 1972 Labis For. Res., Jun 1972 Lesong For. Res.), Chan & Kamarudin (Jun 1979), Cockburn & Ogata (Mar–Apr 1968), □ Dransfield (Jun 1977), Forest Dept., various uniformed staff (Apr 1956), Forestry Students with Kochummen & Ng (Jul 1964), O Heaslett, Mohamad Shah, Ahmad Shukor & Samsuri Ahmad (Jul 1972), Kelsall & Lake (Oct 1892), Kochummen (Jul–Sep 1970), Mohamad Shah (Nov 1973), Mohamad

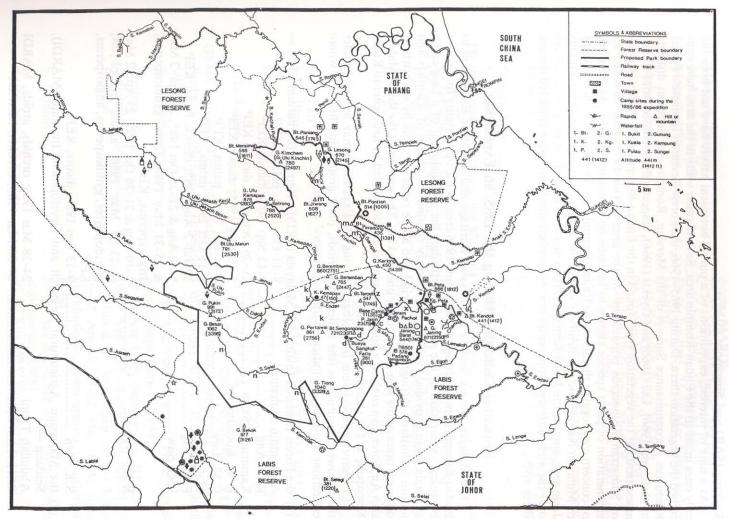


Fig. 1: Botanical collecting localities in the Endau-Rompin area prior to the Malayan Nature Society's 1985–86 Expedition (in symbols) and during the expedition period (represented by alphabets).

distributed to the Arnold Arboretum (A), Kew (K), Leiden (L), Sandakan (SAN), Kuching (SAR) and Singapore (SING).

As a note of interest, expeditions of a purely botanical nature have not been the only ones made to the Endau-Rompin area. Several other visits to the area have concerned the vegetation there. During 1965–1966, the Forest Research Institute's Forest Resources Reconnaissance Surveys of the Mersing, Rompin and Segamat districts by Cracium (1966), Lee (1966) and Gyekis (1966), respectively, included brief standassessments of the vegetation types found in the Endau-Rompin area. Flynn's survey of Sumatran Rhinoceros populations in the area (Flynn 1978) also included an enumeration of plant species known to be eaten by rhinos in the area. At the peak of concern over logging threats to the Endau-Rompin area in July 1977, three groups of Malayan Nature Society members visited the area; one group visited the Endau-Jasin area, another the Jemai-Kemapan area and a third carried out brief aerial surveys over the area, although apparently few or no plant specimens were collected during these visits.

Botanical Collecting During the 1985/86 Expedition

The Malayan Nature Society's Malaysian Heritage and Scientific Expedition to Endau-Rompin between June 1985 and June 1986 created the opportunity for greater botanical exploration of the area. In particular, the establishment of a base-camp at Kuala Jasin provided facilities for a nearly continuous stream of scientists and nature enthusiasts throughout this period and made repeated visits by scientists at different times of the year a convenient undertaking. The support of the Royal Malaysian Air Force also enabled a botanical team to be transported by helicopter to Kuala Kemapan, at the centre of the area.

Collectors of specimens for herbaria during the Expedition may be listed under the following institutions (the collecting periods, plant groups and herbaria where collections are kept are indicated after collectors' names).

(1)	the Forest Research Institute of Ma	laysia (FRIM), Kepong (herbarium KEP) —
	Aminuddin Mohamad	8-11 Oct 1985; palms, KEP
	K.C. Ang	9-13 Sep 1985; dicots, KEP
	Kamarudin Saleh	21-26 Oct 1985; dicots, KEP
	K.M. Kochummen	5-10 Aug 1985; dicots, KEP
	C.M. Low	8-11 Oct 1985; palms, KEP
	Mat Asri	8-11 Oct 1985; palms, KEP
	F.S.P. Ng	30 Jul-2 Aug 1985; dicots, ferns, KEP
	L.G. Saw	5-10 Aug & 21-26 Oct 1985, 23 Apr-2 May
		& 25-31 May 1986; ferns, gymnosperms,
		angiosperms, KEP
	K.M. Wong	5-10 Aug & 21-26 Oct 1985, 23 Apr-2 May
		& 23-31 May 1986; algae, bryophytes,
		pteridophytes, gymnosperms, angiosperms,
		KEP
	S.K. Yap	9-13 Sep 1985; dicots, KEP
(2)	the Malaysian Agricultural Resear	rch and Development Institute (MARDI),
	Serdang —	
	Abdullah Thani	24-28 Mar 1986; orchids, aroids, MARDI
	W.H. Lim	24-28 Mar 1986; orchids, MARDI

	Masron Hasran	20-25 Sep 1985, 7-16 Feb 1986; monocots, dicots, MARDI
	Mishiyah Katman	20–27 Sep 1985; fungi, MARDI
	Mohamad Hanifah	7–16 Feb 1986; dicots, MARDI
	Mohamad Yassin	23-26 Jul 1985, 24-28 Mar 1986; orchids, MARDI
	Mohammed Harun	7-16 Feb 1986; fungi, MARDI
	M. Mooruthy	20-25 Sep 1985; orchids, MARDI
	Nik Mohamed	7-16 Feb 1986; fungi, MARDI
	Noorshinah Hussin	20-27 Sep 1985, 7-16 Feb 1986; fungi, MARDI
	Razali Baki	
	Rosli Asaad	20-25 Sep 1985; orchids, MARDI
	Rozanor Ghani	20-27 Sep 1985, 7-16 Feb 1986; fungi,
	Salmah Idris	
		23–26 Jul & 20–27 Sep 1985; fungi, MARDI
(3)		a (UKM, National University of Malaysia),
(3)	Bangi —	a (OKIVI, Ivational Oniversity of Ivialaysia),
	G. Davison	7-16 Feb 1986; angiosperms, UPM
(4)	the University of Malaya, Kuala L	
(7)	Haji Mohamed	26 Sep-1 Oct 1985; bryophytes, pterido-
	Traji iviolianica	phytes, KLU
	B.H. Kiew	2-6 Sep 1985, 20-27 Mar, 16-22 Apr &
	(HOHOM HOMELE SO THE MENT SO THE	20–28 May 1986; algae, bryophytes, pteridophytes, angiosperms, UPM, KLU
	P. Leong	14–18 Jun 1985, 23–31 May 1986; algae,
	1. Leong	KLU
	R.P. Lim	
		2-7, 14-18 Jun & 25 Sep-1 Oct 1985; algae,
	E ve design de la	
		25 Sep-1 Oct 1985; gymnosperms,
	L. Soepadillo & students	angiosperms, KLU
	C F Taylor	25 Apr-2 May & 19 May-9 Jun 1986;
	C.L. Taylor	pteridophytes, angiosperms, KLU, KEP
(5)	the Universiti Pertanian Malaysia	UPM, Agricultural University of Malaysia),
(3)	Serdang (herharium at Denartme	nt of Biology UPM; at Forestry Faculty
	UPMF) —	int of biology of wi, at forestly faculty
	S Anthonysomy	26-30 Aug 1985, 4-6 Feb 1986; pterido-
	5. Anthonysamy	phytes, angiosperms, UPM
	Ibrahim Idham	19–23 Aug 1985; angiosperms, UPMF
	Jamaluddin Basharuddin	19–23 Aug 1985; angiosperms, UPMF
	R. Kiew	
	K. Klew	2-7 Jun & 26 Aug-7 Sep 1985, 4-6 Feb,
		16-22 Apr & 13-22 May 1986; fungi,
		pteridophytes, gymnosperms, angiosperms, UPM
	S. Madhavan	26-30 Aug & 2-6 Sep 1985; pteridophytes,
		angiosperms, UPM
	Razali Salam & students	26-30 Aug 1985; angiosperms, UPM

(6)	the Botanic Gardens, Singapore (h	
	E.P. Tay	25 Oct-1 Nov 1985; ferns, dicots, SING
(7)	the National University of Singapo	ore (NUS) (herbarium SINU) —
	Ahmad Samsuri	16–20 Jun 1986; pteridophytes, angiosperms, SINU)
	R. Corlett	28 Apr-2 May 1986; angiosperms, SINU
	H. Goh	28 Apr-2 May 1986; angiosperms, SINU
	I. Louis	28 Apr-2 May 1986; fungi, SINU
	A.N. Rao & students	16-20 Jun 1986; angiosperms, SINU
	E. Scott	28 Apr-2 May 1986; angiosperms, SINU
	H. Tan & students	16-20 Jun 1986; bryophytes, pteridophytes, angiosperms, SINU
	T.K. Tan	28 Apr-2 May 1986; fungi, SINU
	Y.C Wee & students	
(8)	the Royal Botanic Gardens, Kew (herbarium K) —	
(-)	S. Andrews	4-7 Feb 1986; dicots, K
	J. Dransfield	
	P.J. Edwards	

The localities from which specimens for herbaria have been collected during the expedition were:

(a) Kampung Peta and the Sungai Endau downstream from Kuala Jasin (eastern portion of the area), by R. Kiew, Ng, Phang, Saw, Taylor, Wong.

(b) Gunung Janing and the Kuala Marong-Kuala Jasin area (eastern portion), by

all collectors except G. Davison and R.P. Lim.

(c) Bukit Sengongong and the "Buaya Sangkut" Falls on the Jasin River (southeastern portion), by Leong, Saw, Wong.

(d) Padang Temambun (southeastern portion), by Davison, B.H. Kiew, R. Kiew,

Masrom, Nik Mohmed, Razali Baki, Saw, Wong.

(e) the Kuala Kemapan area and Gunung Beremban massif (central region), by B.H. Kiew, R. Kiew, Saw, Wong.

(f) the Kinchin River valley (northeastern portion), by B.H. Kiew.

(g) the Endau River between Kuala Kinchin and Kuala Jasin, by R.P. Lim.

(h) the Selai River valley (southwestern portion), by B.H. Kiew.

Besides specimens for herbaria, live-plant propagules were collected by a few individuals. These included the following:

pteridophytes - P. Bradley (Royal Botanic Gardens, Kew).

orchids — Abdullah Thani, W.H. Lim, Mohamad Yassin, M. Mooruthy, Rosli Asaad, Salmah Idris (MARDI), L.G. Saw (FRIM), Shaharin Yussof (Malayan Nature Society).

palms — Khelikuzzaman Hussain, Mohamad Nasir and Safie Hussin (MARDI), Mat Asri and C.M. Low (FRIM), Mustapha Mohamad (UM), J.J.H. Tan (Malayan

Nature Society).

wild yams — Abdullah Thani, Khelikuzzaman Hussain, Mohamad Nasir and Safie Hussin (MARDI).

bananas — Anthonysamy and R. Kiew (UPM), Abdul Malek and Mohamad Shamsudin (MARDI).

monocots other than as named above — Khelikuzzaman (MARDI), Mustapha Mohamad (UM).

dicots — Mat Asri, L.G. Saw and S.K. Yap (FRIM), Abdul Malek, Khelikuzzaman Hussain, Mohamad Nasir, Mohamad Shamsudin and Safie Hussin (MARDI), Mustapha Mohamad and C.E. Taylor (UM), J.J.H. Tan (Malayan Nature Society), C.J. Goh (NUS).

All of the above were collected in the vicinity of Kuala Jasin, Kuala Marong and Gunung Janing, except those by Shaharin Yussof (which also included collections from the vicinity of G. Tiong, the Buaya Sangkut falls on the Jasin, and Padang Temambun) and J.J.H. Tan (which included collections from the vicinity of Kuala Kemapan, the Buaya Sangkut falls, Padang Temambun and the Lemakoh valley).

References

- Burkill, I.H. (1927). Botanical collectors, collections and collecting places in the Malay Peninsula. *Gard. Bull. S.S.* 4(4 & 5): 113–202.
- Cracium, G.C.J. (1966). Forest Resources Reconnaissance Survey of Malaya, no. 2. Mersing District, Johore. Forest Research Inst., Forest Department, Malaya.
- Flynn, R. (1978). The Sumatran Rhinoceros in the Endau-Rompin National Park of Peninsular Malaysia. *Mal. Nat.* 4(2): 5-12.
- Gyekis, K.D. (1966). Forest Resources Reconnaissance Survey of Malaya, no. 7. Segamat District, Johore. Forest Research Inst., Forest Department, Malaya.
- Hervey, D.F.A. (1882). The Endau and its tributaries. J. Str. Br., Roy. As. Soc., no. 8: 93-124.
- Lake, H.W. (1894). A journey to the source of the Indau. J. Str. Br., Roy. As. Soc., no. 25: 1-9.
- Lake, H.W. & H.J. Kelsall. (1895). A journey on the Semberong River. From Kuala Indau to Batu Pahat. J. Str. Br., Roy. As. Soc., no. 26: 1–33.
- Lee, P.C. (1966). Forest Resources Reconnaissance Survey of Malaya, no. 3. Rompin Forest District, Pahang. Forest Research Inst., Forest Department, Malaya.
- Miklucho-Maclay, N. (1875). Ethnologische excursion in Johor. S. Natuurkundig Tijdschrift voor N. Indie, Thiel 35: 251-258.
- Miklucho-Maclay, N. (1878). Dialects of the Melanesian tribes in the Malay Peninsula. J. Str. Br., Roy. As. Soc., no. 1: 38-44.
- Skinner, A.M. (1878). Geography of the Malay Peninsula. J. Str. Br., Roy. As. Soc., no. 1: 52-62.
- Steenis-Kruseman, M.J. van. (1950). Malaysian Plant Collectors and Collections, being a Cyclopaedia of Botanical Exploration in Malaysia and a guide to the concerned literature up to the year 1950. In: C.G.G.J. van Steenis (ed.), *Flora Malesiana, Series* 1, Vol. 1, clii + 639 p.
- Thomson, J.T. (1881). A sketch of the career of the late James Richardson Logan, of Penang and Singapore. J. Str. Br., Roy. As. Soc., no. 7: 75-81.