

## Plants in mangrove forests of the Lampi group of islands in Tanintharyi Division, Myanmar

### Background

Previous surveys of mangrove flora in Myanmar had been mostly conducted on the mainland (e.g. Win Maung, 1999; JICA, 2005). The Lampi group of islands in Tanintharyi Division has no permanent settlers until the 1960s and the only study on the mangroves of the islands was the survey by San Tha Tun *et al.* (2008). Their taxonomic study was carried out mainly on Lampi island and identification of some plants was not to the species level. The present work is a further study of the mangrove flora on Lampi and its adjacent islands. The main objective of this study is to document the mangrove flora of the islands. Other objectives are to gather information on local names of plants and their uses for ethno-botanical studies.

### Methodology

Vascular plants occurring inside and adjacent to mangrove forests in 12 sites including seven on Lampi island, three on Bo Cho island, one on Ko Phawt island, and one on Wa Ale island were identified and recorded (Fig. 1). The local names of the plants were obtained by interviewing Myanmar and Moken villagers on Bo Cho island. The names were first written down in Burmese and then transcribed into alphabetical notation for comparison with Myanmar names listed by Kress *et al.* (2003).

The flora list of San Tha Tun *et al.* (2008) was also referred to determine if there are any new records of species found in the area. Reference was also made with the flora data of Kress *et al.* (2003) and Maung Maung Than (2006) for mainland Tanintharyi. We have followed the descriptions of Tomlinson (1986) and Giesen *et al.* (2003) in order to determine whether a given plant species present in the area is a true mangrove or mangrove associate or neither. The field survey was conducted from 10 to 16 December 2010. The checklist of plants on the Lampi group of islands was also compared to the national list of mangrove species of Myanmar (Spalding *et al.*, 2010).

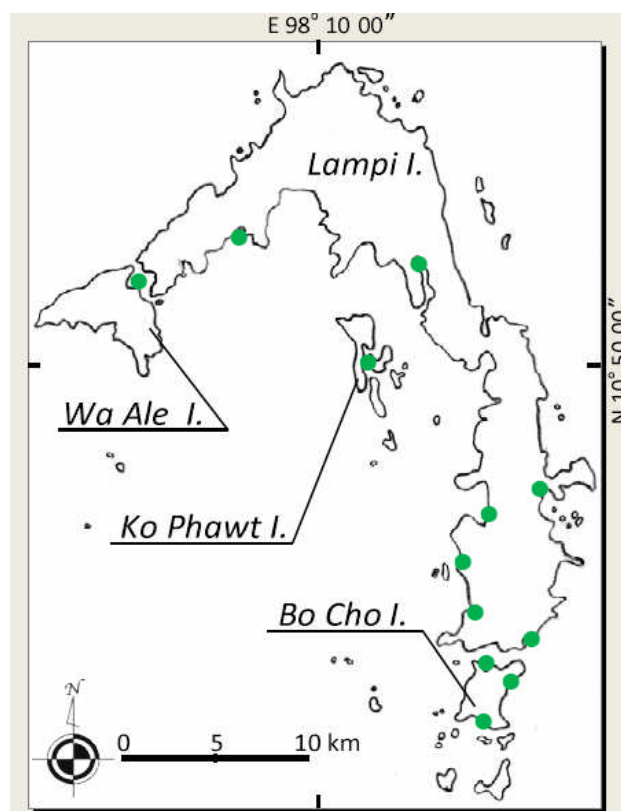


Fig. 1. Study sites on the Lampi group of islands

### Results and discussion

A total of 63 plant species belonging to 36 families were identified (Table 1). Of the total, 25 species are new records to the mangrove flora of the Lampi group of islands. They include two true mangroves (*Sonneratia alba* and *Xylocarpus moluccensis*), and 10 mangrove associates (*Acanthus volubilis*, *Allophylus cobbe*, *Ardisia elliptica*, *Cynometra iripa*, *Dalbergia spinosa*, *Diospyros ferrea*, *Intsia bijuga*, *Merope angulata*, *Phoenix paludosa* and *Scaevola taccada*). The remaining 13 species are non-mangrove plants. When compared with the national list of Myanmar (Spalding *et al.*, 2010), mangrove species not recorded in the present study are *Avicennia alba*, *A. officinalis*, *Bruguiera sexangula*, *Excoecaria indica*, *Heritiera fomes*, *Kandelia candel*, *Lumnitzera racemosa*, *Scyphiphora hydrophyllacea*, *Sonneratia apetala*, *S. caseolaris* and *S. griffithii*.

Of the 10 mangrove associates recorded in this survey, *A. elliptica* and *C. iripa* (Fig. 2) have been reported to be common throughout Southeast Asia (Tomlinson, 1986). Interestingly, they are not listed in Kress *et al.* (2003) and Maung Maung Than (2006) for mainland Tanintharyi. This would suggest that the distribution of those two species may be somewhat localized. Their ecology and geographical distribution in Myanmar warrant further studies.



Fig. 2. *Ardisia elliptica* (left) and *Cynometra iripa* (right)

## Conclusion

From the survey of 12 sites on the Lampi group of islands, a total of 63 plant species belonging to 36 families were identified. Of the total, 25 species are new records. Of these, two are true mangroves and 10 are mangrove associates. Information on local names of plants and their uses were also gathered for ethnobotanical studies.

## Acknowledgements

We wish to thank the Forest Resource Environment Development and Conservation Association (FREDA), Action for Mangrove Reforestation (ACTMANG), and Forest Department, Myanmar for granting us permission to enter the area and for supporting this research. Our appreciation goes to Mr. San Tha Tun, Assoc. Prof. of Patheingyi University and Dr. Reiko Minagawa, Tokyo University of Agriculture for plant identification and useful advice.

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Table 1. Plants in mangrove forests of the Lampi group of islands

No.	Family	Botanical name	ST	TT	WA	Local name		General Myanmar name
						Lampi Moken	Lampi Myanmar	
1	Acanthaceae	<i>Acanthus ilicifolius</i>	MA	○	●	Nipa-suu	Kha-yar-suu	Kha-yar-suu
2		<i>Acanthus volubilis</i>	MA			Not available	Not available	Kha-yar-nwe
3	Amaryllidaceae	<i>Crinum asiaticum</i>				Ba-kon	Pa-daik-pan	Koyan-gyi
4	Apocynaceae	<i>Cerbera manghas</i>	MA	○		Pa-lan-kaw-than	Ye-tha-mot	Za-lat
5	Arecaceae	<i>Caryota urens</i>				O-mote	Mote	Minbaw
6		<i>Licuala spinosa</i>				Par-line	Ta-lu	Salu-supauk
7		<i>Nypa fruticans</i>	TM	○	●	Sa-lar	Ya-ni-ban	Dani
8		<i>Oncosperma tigillarum</i>	MA	○		Tha-lin, Ka-bwol	Ka-la-zun	Kazaung
9		<i>Phoenix paludosa</i>	MA			La-gile	Kulu	Thinbaung
10	Asclepiadaceae	<i>Finlaysonia obovata</i>		○		Hta-lwee	Za-lu-war	Byauk-nwe
11		<i>Hoya parasitica</i>				Ta-onn	Pan-kar	Payauung-pan
12		<i>Sarcobolus carinatus</i>				(unknown)	Tha-mot	(Sut-)kha-mon-nwe
13	Aspleniaceae	<i>Asplenium nidus</i>				Not available	Not available	(unknown)
14	Asteraceae	<i>Pluchea indica</i>				Ta-lot-sar-nan	Ye-Khayu	Khayu
15	Avicenniaceae	<i>Avicennia marina</i>	TM	○	●	No local name	No local name	Thame-phyu
16	Bignoniaceae	<i>Dolichandrone spathacea</i>	MA	○	●	Ta-lot	Ba-kai	(Ye-)thakyut
17	Blechnaceae	<i>Stenochlaena palustris</i>				Kal-thay-do-lwee	Ga-lote-ngot	Damin-nwe
18	Caesalpiniaceae	<i>Caesalpinia crista</i>	MA	○		Ba-kon-do-lwee	Su-kauk	Alo-lay(-nwe)
19		<i>Caesalpinia major</i>				Saw-laing	Su-boke	Kalein
20		<i>Cynometra iripa</i>	MA			Kya-nai	Ma-got	Myinga
21		<i>Intsia bijuga</i>	MA			No local name	Mae-ka-laung	Saga-lun
22	Casuarinaceae	<i>Casuarina equisetifolia</i>		○		Ba-kon-la-oi-ye	Lay-thar(-pin)	Pinle-kabwe
23	Clusiaceae	<i>Calophyllum inophyllum</i>	MA	○		Paw-naung	Pon-nar	Pon-nyet
24	Combretaceae	<i>Lumnitzera littorea</i>	TM	○	●	Ka-non	Than-thet	Eilk-mathwe(-ni)
25		<i>Terminalia catappa</i>	MA	○		La-ka	Banda-yin	Banda, Badan
26	Convolvulaceae	<i>Ipomoea pes-caprae</i>		○		Ba-kon-bu-nga	Ye-kazun	Pinle-kazun
27		<i>Ipomoea tuba</i>				Ja-bote	Pot-pon	Bon-sein-nwe
28	Ebenaceae	<i>Diospyros ferrea</i>	MA			Not available	No local name	Kon-Myinga, Myinga-Net
29		<i>Diospyros malabarica</i>				Ga-nee	Boke-pin	Bok-pyin
30	Euphorbiaceae	<i>Excoecaria agallocha</i>	TM	○	●	Bu-tha	Tayaw	Tayaw
31	Fabaceae	<i>Dalbergia candenatensis</i>	MA	○		La-larr (vine)	Ye-kama-laing	Byaik-nwe
32		<i>Dalbergia spinosa</i>	MA			Zaw-yaing	Ye-ka-lain-sae	Byaik(-su)
33		<i>Derris scandens</i>		○		La-larr (vine)	Ka-ma-laing	Migyaung-nwe, Nwe-pyu
34		<i>Derris trifoliata</i>	MA	○		La-let	Nwe-net	Nwe-net
35		<i>Pongamia pinnata</i>	MA	○		Pa-ai	Kalon(-pin)	Thinwin-pyu
36	Flagellariaceae	<i>Flagellaria indica</i>		○		Kwal-kala	Myauk-kyein	Myauk-kyein
37	Goodeniaceae	<i>Scaevola taccada</i>	MA			Bu-bon	Ywet-kya-kay	Pinle-dai
38	Lecythidaceae	<i>Barringtonia asiatica</i>	MA	○		Bo-thon	Ban-dar-yaing(-alongyi)	Kyi-gyi
39	Lythraceae	<i>Pemphis acidula</i>	TM	○	●	No local name	No local name	Pile-dan
40	Malvaceae	<i>Hibiscus tiliaceus</i>	MA	○		Bar-lway	Lay-nyar-shaw-awine	Thaman-shaw
41		<i>Thespesia populnea</i>	MA	○		Ja-boot	Lay-nyar-shaw-achun	Pinle-swedaw
42	Meliaceae	<i>Xylocarpus granatum</i>	TM	○	●	Tha-ku-dan	Pinle-on	Pinle-on
43		<i>Xylocarpus moluccensis</i>	TM		●	Ta-gue	Kya-na	Kya-na
44	Myrsinaceae	<i>Aegiceras corniculatum</i>	TM	○	●	Par-pi	La-mine	Kaya, Ye-Kaya
45		<i>Ardisia elliptica</i>	MA			Ji-na	Kyetma-ok	Kyetma-ok
46	Olaceae	<i>Ximena americana</i>				Bar-dan	Salon-zi-pin	Pinle-zi
47	Pandanaceae	<i>Pandanus odoratissimus</i>	MA	○		Sa-ke	Jit	Thabaw, Sat-thapoo
48	Plumbaginaceae	<i>Aegialitis rotundifolia</i>	TM	○	●	No local name	No local name	Sa-pin
49	Pteridaceae	<i>Acrostichum aureum</i>	TM	○	●	Kal-thay	Da-yal-ngot	Hnget-gyi-taung(-ywet-gyi)
50		<i>Acrostichum speciosum</i>	TM	○		Kal-thay	Da-yal-ngot	Hnget-gyi-taung(-ywet-the)
51	Rhizophoraceae	<i>Bruguiera cylindrica</i>	TM	○	●	Pa-yone	Saung-tha-yar	Nam-byu
52		<i>Bruguiera gymnorhiza</i>	TM	○	●	Bwa-ma-thu	Saung	Byu-u-talone, Byu-oak-saung
53		<i>Bruguiera parviflora</i>	TM	○	●	Pa-yone	Bru-bot	Byu-wa-kyeik-lein
54		<i>Ceriops decandra</i>	TM	○	●	Tha-ngan	Saung	Madama
55		<i>Ceriops tagal</i>	TM	○	●	Mon-thu	Ka-byaing	Madama-myaw
56		<i>Rhizophora apiculata</i>	TM	○	●	Lar-kup	Pa-yone-amae	Byu-chidauk-apo
57		<i>Rhizophora mucronata</i>	TM	○	●	Ja-kan	Pa-yone-phyu	Byu-chidauk-ama
58	Rubiaceae	<i>Guettarda speciosa</i>				Ba-oung	Banda-yaing	Lay-do-pho
59	Rutaceae	<i>Merope angulata</i>	MA			Ma-nauk-kaw-thar	Taw-shauk	Taw-shauk
60	Sapindaceae	<i>Allophylus cobbe</i>	MA			Ba-lat	Non-nar-yaing-phyu	Mo-hman, Say-thon-gwa
61	Sonneratiaceae	<i>Sonneratia alba</i>	TM		●	Par-pi	Ka-ba	Lamu-ta-tha
62	Sterculiaceae	<i>Heritiera littoralis</i>	TM	○	●	The-kon	Ka-so	Kon-kanazo, Kanazo-ywet-gyi
63	Verbenaceae	<i>Clerodendrum inerme</i>	MA	○		Ba-kon-me-nan	Ye-don-tha	Taw-kyauung-pan

Botanical names are based on Index Kewensis; the International Plant Names Index; the Royal Botanic Gardens, Kew; the Harvard University Herbaria; and the Australian National Herbarium.

TM = true mangrove, MA = mangrove associate (Tomlinson, 1986; Giesen *et al.*, 2006).

○ Mangrove flora recorded by San Tha Tun *et al.* (2008) on Lampi and adjacent islands. The following species are not found in the present list: *Avicennia alba*, *A. officinalis*, *Brownlowia tersa*, *Cynometra ramiflora*, *Sonneratia griffithii* and *Scyphiphora hydrophyllacea*.

● Mangrove flora recorded under the national species list of Myanmar in the *World Atlas of Mangroves* (Spalding *et al.*, 2010). The following species are not found in the present list: *Avicennia alba*, *A. officinalis*, *Bruguiera sexangula*, *Excoecaria indica*, *Heritiera fomes*, *Kandelia candel*, *Lumnitzera racemosa*, *Scyphiphora hydrophyllacea*, *Sonneratia apetala*, *S. caseolaris* and *S. griffithii*.

Local names include those of Lampi Moken and Lampi Myanmar, with comparisons to General Myanmar names.