

MATERIALS AND METHODS:

- two the biggest rivers (Cabano River and Sibunag River)
- field research held in 24 large scale plots
- each plot has a shape of circle with 10 m in diameter
- GPS coordinates of centers of the plots were obtained through the system of random selection
- recorded complete vascular flora (trees, shrubs, palms, herbs, climbers and epiphytes) including an extra information about the structure and dynamics of the mangrove forest (dead trees, quantity of tree seedlings etc.)
- all trees and shrubs were recorded by species, height and within individuals with the circumference higher than 10 cm was also measured the circumference which later served for the calculation of diameter at breast height (DBH)
- within herbs were examined all mangrove non-woody species and all present plant species (mostly creepers and climbers). These were recorded within species and number of individuals
- Species diversity in riverine mangroves was evaluated with the Simpson diversity index and equitability (evenness) of the community.



Cabano River: *Rhizophora stylosa*, Rhizophoraceae

Table 1: Mangrove tree and shrub species composition in 24 plots along Sibunag and Cabano River

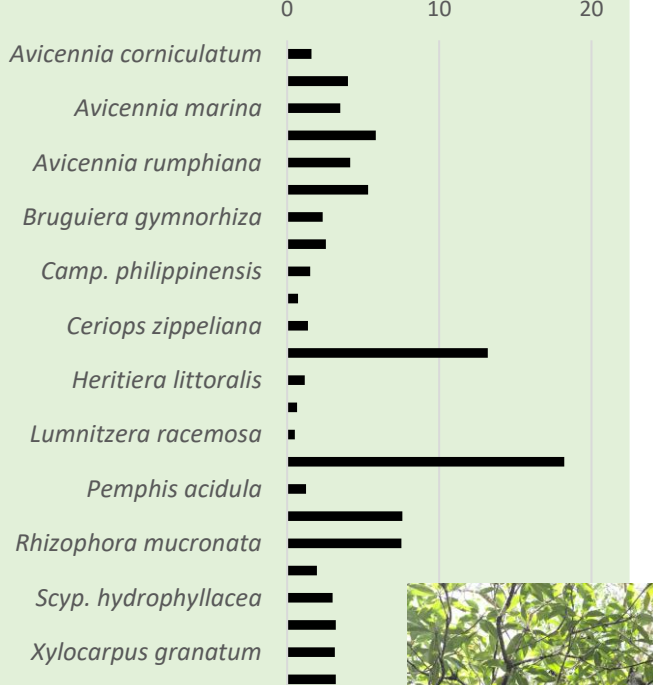
No.	Species	Present	%
1	<i>Avicennia corniculatum</i>	22	1.6
2	<i>Avicennia floridum</i>	55	4.0
3	<i>Avicennia marina</i>	48	3.5
4	<i>Avicennia officinalis</i>	80	5.8
5	<i>Avicennia rumphiana</i>	57	4.2
6	<i>Bruguiera cylindrica</i>	73	5.3
7	<i>Bruguiera gymnorhiza</i>	32	2.3
8	<i>Bruguiera sexangula</i>	35	2.5
9	<i>Camptostemon philippinensis</i>	21	1.5
10	<i>Ceriops tagal</i>	10	0.7
11	<i>Ceriops zippeliana</i>	19	1.4
12	<i>Excoecaria agallocha</i>	181	13.2
13	<i>Heritiera littoralis</i>	16	1.2
14	<i>Lumnitzera littorea</i>	9	0.7
15	<i>Lumnitzera racemosa</i>	7	0.5
16	<i>Nypa fruticans</i>	250	18.2
17	<i>Pemphis acidula</i>	17	1.2
18	<i>Rhizophora apiculata</i>	104	7.6
19	<i>Rhizophora mucronata</i>	103	7.5
20	<i>Rhizophora stylosa</i>	27	2.0
21	<i>Scyphiphora hydrophyllacea</i>	41	3.0
22	<i>Sonneratia alba</i>	44	3.2
23	<i>Xylocarpus granatum</i>	43	3.1
24	<i>Xylocarpus moluccensis</i>	44	3.2
Total number of species		1338	100.0

SPECIES DIVERSITY IN RIVERINE MANGROVES OF GUIMARAS ISLAND, PHILIPPINES

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Figure 1: Chart of tree and shrub species composition



Avicennia rumphiana, Avicenniaceae with the stem circumference exceeding 4 m



Rare case of epiphytic Pandanus growing in mangrove canopy



Finlaysonia obovata, Asclepiadaceae, mangrove woody climber

RESULTS:

Within two separate riverine mangrove researcher areas (total area more than 7539 m²) have been investigated 1691 plants including 1338 true mangrove trees and higher shrubs (Table 1) and 278 vascular terrestrial plants and 75 epiphytes. In these were found 24 mangrove tree/shrub species (Figure 1) and 15 plant species, which were mostly lianas and epiphytes. In case of true mangrove tree and higher shrub species (without genera *Acanthus*) have been calculated Simpson diversity index $D=2,75$. This number have been presented with the Equitability (evenness) $ED=D/D_{MAX}$, $ED=0,89$. This number is very close to value of 1, which refers to highly diverse community. The most common mangrove trees/palms were *Nypa fruticans* and genus *Rhizophora*, whereas *Drynaria quercifolia*, *Acanthus ilicifolius* and genus *Pandan* were the most abundant in herbs and small shrubs.