

## A List of Herbarium Specimens<sup>1</sup> (Angiosperms) from Vanuatu, Collected in 2000 and 2001

Tamotsu HASHIMOTO<sup>2</sup>, Koji SUGIMURA<sup>3</sup>, Norio TANAKA<sup>4</sup>, Goro KOKUBUGATA<sup>4</sup>,  
Tatsuo KONISHI<sup>4</sup>, Sam CHANEL<sup>5</sup> and Tsukasa IWASHINA<sup>4</sup>

### ACANTHACEAE

#### *Acanthus ilicifolius* L.

ESPIRITU SANTO. Seashore, in front of Tangoa Island, 15°35'25''S, 166°58'54''E, 26, Oct. 2001 (Tanaka 54).

#### *Hemigraphis repens* Villar.

ANATOM. Track from Anelghowhat to Mt. Ukapaerek, 180 m alt., 5, Nov. 2001 (Kokubugata 3426 and 3431). Track to summit of Mt. Ukapaerek, 400 m alt., 5, Nov. 2001 (Kokubugata 3513). Foot of Mt. Nidwon Nelcau, 70 m alt. 5, Nov. 2001 (Kokubugata 3514). Ibid., 120 m alt. 5, Nov. 2001 (Kokubugata 3518).

EFATE. Near Eton, 3 m alt., 17°46'92.6''S, 168°31'34.6''E, 3, Nov. 2001 (Kokubugata 3419). Seashore, opposite side of Hat Island, 1 m alt., 17°36'78.1''S, 168°14'39.8''E, 3, Nov. 2001 (Kokubugata 3421).

ESPIRITU SANTO. Side of track from entrance to peak of Mt. Tabwemasana, 800 m alt., 20, Oct. 2001 (Kokubugata 3359). The Santo Forest Research Station, Rotal, 135 m alt., 15°15'41.6''S, 167°05'84.2''E, 29, Oct. 2001 (Kokubugata 3408). Track from 1st Camp to 2nd Camp, Mt. Tabwemasana range, 700 m alt. 25, Oct. 2001 (Kokubugata 3484).

### AGAVACEAE

#### *Dracaena graminea* Wall.

ESPIRITU SANTO. Near Narango, edge of forest, 310 m alt., 8, Nov. 2000 (Sugimura 00-1190).

#### *Dracaena graminifolia* L.

ANATOM. Track from Anelghowhat to Mt. Ukapaerek, 180 m alt., 5, Nov. 2001 (Kokubugata 3429).

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<sup>1</sup>All the specimens are conserved in TNS, and the duplicates will be sent to PVNH.

<sup>2</sup>The Research Institute of Evolutionary Biology, Kamiyoga, Setagaya-ku, Tokyo, 158-0098 Japan.

<sup>3</sup>Graduate School of Science and Technology, Chiba University, 648 Matsudo, Chiba, 271-8510 Japan.

<sup>4</sup>Tsukuba Botanical Garden, National Science Museum, Tsukuba, 305-0005 Japan.

<sup>5</sup>Department of Forestry, Port Vila, PMB064 Republic of Vanuatu.

## AMARANTHACEAE

*Achyranthes aspera* L.

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3350).

## AMARYLLIDACEAE

*Proiphys amboinensis* Herb.

ESPIRITU SANTO. Between 1st Camp and 2nd Camp, Mt. Tabwemasana range, 290 m alt., 30, Oct. 2000 (Sugimura 00-1059).

## APOCYNACEAE

*Cerbera odollam* Gaertner

ESPIRITU SANTO. Near Narango, edge of forest, 330 m alt., 8, Nov. 2000 (Sugimura 00-1193 and 00-1197).

*Ochrosia oppositifolia* K. Schum.

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-6 and 00-10).

## ARACEAE

*Alocasia* sp.

EFATE. Near Pang Pang, 21, Oct. 2000 (Konishi 00-1 and 00-2).

*Colocasia esculenta* Schott

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-49). Water taro farm, Second Blue Hole, 15°18'34''S, 167°09'04''E, 21, Oct. 2001 (Tanaka 21).

*Pipremnum pinnatum* (L.) Engl.

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-24).

*Pistia stratiotes* L.

ESPIRITU SANTO. Water taro farm, Second Blue Hole, 15°18'34''S, 167°09'04''E, 21, Oct. 2001 (Tanaka 18). Seashore, Saraoutou, -0.5 m alt., 15°27'00''S, 167°12'19''E, 19, Oct. 2001 (Tanaka 14).

## ARALIACEAE

*Polyscias scutellaria* (Burm. f.) Fosb.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1017).

*Schefflera neo-ebudica* Guillaumin

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-44). Near Narango, edge of forest, 300 m alt., 8, Nov. 2000 (Sugimura 00-1186).

## ASCLEPIADACEAE

*Hoya australis* R. Br. ex Traill

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1022).

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1078). Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3445).

*Hoya* sp.

EFATE. Near Pang Pang, 21, Oct. 2000 (Konishi 00-3).

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-31).

## BEGONIACEAE

*Begonia vitiensis* A. C. Sm.

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., 200 m southwest track from 2nd Camp, 22, Oct. 2001 (Kokubugata 3381 and 3386). Track from 1st Camp to 2nd Camp, Mt. Tabwemasana range, 900 m alt., 25, Oct. 2001 (Kokubugata 3491).

## BORAGINACEAE

*Cordia dichotoma* Forst. f.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 150 m alt., 29, Oct. 2000 (Sugimura 00-1053).

*Cordia subcordata* Lam.

EFATE. Nagar resort, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1008).

ESPIRITU SANTO. Luganville east, near Palikuro, 1 m alt., 27, Oct. 2001 (Iwashina 01-13). Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka 34).

## BUDDLEJACEAE

*Buddleja asiatica* Lour.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 80 m alt., 29, Oct. 2000 (Sugimura 00-1047). Between 2nd Camp and 1st Camp, Mt. Tabwemasana range, 1115 m alt., 2, Nov. 2000 (Sugimura 00-1144). Between Kerepua and entrance of Mt. Tabwemasana, 15°19'41.9''S, 166°42'49.7''E, 135 m alt., 19, Oct. 2001 (Kokubugata 3341). Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3385). Track from 1st Camp to 2nd Camp, Mt. Tabwemasana range, 1100 m alt., 25, Oct. 2001 (Kokubugata 3492).

## CAMPANULACEAE

*Lobelia* sp.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1800 m alt., 1, Nov. 2000 (Sugimura 00-1122).

## CANNACEAE

*Canna indica* L.

ESPIRITU SANTO. Two km from Sara to Matantas, 15°11'29''S, 167°02'56''E, 22, Oct. 2001 (Tanaka 25).

## CERATOPHYLLACEAE

*Ceratophyllum submersum* L. subsp. *muricatum* (Cham.) Wilmot-Dear var. *echinatum* (A. Gray)  
Wilmot-Dear

ANATOM. Mouth of river, Ivanhelhat, 20°14'05''S, 169°46'17''E, 6, Nov. 2001 (Tanaka 169).

ESPIRITU SANTO. Mouth of river, Matantas, 15°18'34''S, 166°56'45''E, 22, Oct. 2001 (Tanaka 23). Pond, Bellemoule, 15°34'49''S, 167°06'41''E, 23, Oct. 2001 (Tanaka 41).

## CHLORANTHACEAE

*Ascarina lanceolata* Hook.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1650 m alt., 1, Nov. 2000 (Sugimura 00-1110).

## CHRYSOBALANACEAE

*Atuna* sp.

ESPIRITU SANTO. Near Narango, edge of forest, 300 m alt., 8, Nov. 2000 (Sugimura 00-1187).

## COMBRETACEAE

*Terminalia catappa* L.

ANATOM. Seashore, Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 159).

## COMMELINACEAE

*Aneilema vitiense* Seem.

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., 100 m northwest from 2nd Camp, 21, Oct. 2001 (Kokubugata 3377). The Santo Forest Research Station, Rotal, 135 m alt., 15°15'41.6''S, 167°05'84.2''E, 30, Oct. 2001 (Kokubugata 3406).

*Pollia secundiflora* (Blume) Bakh. f.

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Iwashina 00-4). Ibid., 24, Oct. 2000 (Konishi 00-28). Ibid., 480 m alt., 15°21'54.7''S, 166°58'58.5''E, 28, Oct. 2001 (Kokubugata 3505).

## COMPOSITAE

*Emilia* sp.

ESPIRITU SANTO. Kerepua, seashore, 1 m alt., 28, Oct. 2000 (Sugimura 00-1042).

*Gnaphalium* sp.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1380 m alt., 1, Nov. 2000 (Sugimura 00-1092).

*Pluchea odorata* (L.) Cass.

ESPIRITU SANTO. Between Kerepua and entrance of Mt. Tabwemasana, 15°19'41.9"S, 166°42'49.7"E, 19, Oct. 2001 (Kokubugata 3339).

*Wedelia biflora* DC.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1015).

ESPIRITU SANTO. Track from 1st Camp to 2nd Camp, Mt. Tabwemasana, 25, Oct. 2001 (Kokubugata 3476).

*Youngia japonica* DC.

ESPIRITU SANTO. Track from 1st Camp and 2nd Camp, Mt. Tabwemasana, 25, Oct. 2001 (Kokubugata 3493).

## CONVOLUVULACEAE

*Ipomoea aquatica* Forssk.

ESPIRITU SANTO. Stream, Luganville, 15°30'46"S, 167°09'52"E, 23, Oct. 2001 (Tanaka 43).

*Ipomoea pes-caprae* (L.) Sweet

ESPIRITU SANTO. Seashore, in front of Tangoa Island, 15°35'25"S, 166°58'54"E, 26, Oct. 2001 (Tanaka 57).

## CORIARIACEAE

*Coriaria ruscifolia* L.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1350 m alt., 1, Nov. 2000 (Sugimura 00-1091). Ibid., 1540 m alt., 1, Nov. 2000 (Sugimura 00-1103). Near peak of Mt. Tabwemasana, 1300 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3459).

## CORYNOCARPACEAE

*Corynocarpus similis* Hemsl.

ESPIRITU SANTO. Near Narango, edge of forest, 300 m alt., 8, Nov. 2000 (Sugimura 00-1189).

## CRUCIFERAE

*Cardamine* sp.

ESPIRITU SANTO. Water taro farm, Second Blue Hole, 15°18'34"S, 167°09'04"E, 21, Oct. 2001 (Tanaka 19).

## CUCURBITACEAE

*Coccinia grandis* (L.) J. Voigt

ESPIRITU SANTO. Tanafo, edge of forest, 170 m alt., 7, Nov. 2000 (Sugimura 00-1175). Stream at northeast of Butmas, 15°20'71.9"S, 167°04'82.6"E, 180 m alt., 28, Oct. 2001 (Kokubugata 3502).

## CUNONIACEAE

*Geissois denhamii* Seem.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1750 m alt., 1, Nov. 2000 (Sugimura 00-1139).

*Weinmannia denhami* Seem.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1600 m alt., 1, Nov. 2000 (Sugimura 00-1130).

## CYMODOCEACEAE

*Cymodocea rotundata* Ehrenb. & Hempr. ex Aschers.

ANATOM. Seashore of Anelghowhat, -1~2 m alt., 20°14'07"S, 169°46'50"E, 6, Nov. 2001 (Tanaka 174 and 175). Seashore of Mystery Island, -1~2 m alt., 20°14'58"S, 169°46'26"E, 5, Nov. 2001 (Tanaka 161).

ERAKOR. South seashore of Erakor Island, near Port Vila, 17°46'34"S, 168°18'27"E, 12, Oct. 2001 (Tanaka 2 and 4).

ESPIRITU SANTO. Seashore, in front of Hotel Santo, Luganville, 15°31'07"S, 167°10'07"E, 16, Oct. 2001 (Tanaka 5). Seashore, Sarunda, -0.5 m alt., 15°27'52"S, 167°12'49"E, 19, Oct. 2001 (Tanaka 11). Seashore, Palikuro, -0.5 m alt., 15°28'58"S, 167°14'47"E, 22, Oct. 2001 (Tanaka 27). Seashore, 3 km of Palikuro to Sarunda, -0.5 m alt., 15°29'53"S, 166°14'10"E, 27, Oct. 2001 (Tanaka 64).

*Cymodocea serrulata* (R. Br.) Aschers. & Magnus.

ANATOM. Seashore of Anelghowhat, -1~2 m alt., 20°14'07"S, 169°46'50"E, 6, Nov. 2001 (Tanaka 173).

*Halodule pinifolia* (Miki) den Hartog

ESPIRITU SANTO. Seashore, in front of Hotel Santo, Luganville, 15°31'07"S, 167°10'07"E, 16, Oct. 2001 (Tanaka 7). *Ibid.*, 31, Oct. 2001 (Tanaka 141).

*Halodule uninervis* (Forssk.) Aschers.

ESPIRITU SANTO. Seashore, Sarunda, -0.5 m alt., 15°27'52"S, 167°12'49"E, 19, Oct. 2001 (Tanaka 12).

*Syringodium isoetifolium* (Aschers.) Dandy

ANATOM. Seashore of Mystery Island, -1~2 m alt., 20°14'58"S, 169°46'26"E, 5, Nov. 2001 (Tanaka 162). Seashore of Anelghowhat, -1~2 m alt., 20°14'07"S, 169°46'50"E, 6, Nov. 2001 (Tanaka 172).

## CYPERACEAE

*Carex fissilis* Boott.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1082). Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1560 m alt., 1, Nov. 2000 (Sugimura 00-1126). Ibid., 1600 m alt., 1, Nov. 2000 (Sugimura 00-1132). Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3384).

*Carex* sp.

ESPIRITU SANTO. Between 1st Camp and 2nd Camp, Mt. Tabwemasana range, 500 m alt., 30, Oct. 2000 (Sugimura 00-1062).

*Fimbristylis complanata* (Rez.) Link.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 85 m alt., 29, Oct. 2000 (Sugimura 00-1048).

*Fimbristylis dichotoma* (L.) Vahl. subsp. *longispica* (Steudel) T. Koyama

ESPIRITU SANTO. Kerepua, seashore, 1 m alt., 28, Oct. 2000 (Sugimura 00-1041).

*Gahnia aspera* (R. Br.) Spreng.

ANATOM. Mt. Ukapaerek, 150 m alt., 5, Nov. 2001 (Iwashina 01-43).

## DIOSCOREACEAE

*Dioscorea* aff. *bulbifera*

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-5).

*Dioscorea pentaphylla* L.

ESPIRITU SANTO. Near Narango, edge of forest, 330 m alt., 8, Nov. 2000 (Sugimura 00-1196).

## ELAEOCARPACEAE

*Aceratium oppositifolium* DC.

ESPIRITU SANTO. Near Narango, edge of forest, 330 m alt., 8, Nov. 2000 (Sugimura 00-1195).

*Elaeocarpus floridanus* Hemsl.

ESPIRITU SANTO. Near Narango, edge of forest, 310 m alt., 8, Nov. 2000 (Sugimura 00-1191).

## ERICACEAE

*Vaccinium whiteanum* Sleum.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1800 m alt., 1, Nov. 2000 (Sugimura 00-1118). West peak of Mt. Tabwemasana, 1860 m alt., 1, Nov. 2000 (Iwashina 00-54). Near peak of Mt. Tabwemasana, 1800 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3464). Ibid., 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3440).

## EUPHORBIACEAE

*Acalypha amentacea* Roxb. var. *grandis* (Benth.) F. R. Fosberg

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m south-west from 2nd Camp, 22, Oct. 2001 (Kokubugata 3390).

*Acalypha grandis* Benth.

EFATE. Klems Hill, wayside, 160 m alt., 20, Oct. 2000 (Sugimura 00-1005).

*Baccaurea stylaris* Muell. Arg.

ESPIRITU SANTO. Near Narango, edge of forest, 280 m alt., 8, Nov. 2000 (Sugimura 00-1177).  
Ibid., 290 m alt., 8, Nov. 2000 (Sugimura 00-1181).

*Claoxylon neo-ebudicum* Airy Shaw

ESPIRITU SANTO. Siketket, in lowland forest, 300 m alt., 7, Nov. 2000 (Sugimura 00-1164).

*Claoxylon* sp.

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-29).

*Codiaeum variegatum* (L.) Bl. subsp. *mollucanum* (Decne.) Muell. Arg.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1018).

*Euphorbia atoto* Forst. f.

EFATE. Near Eton, 17°46'92.6''S, 168°31'34.6''E, 3 m alt., 3, Nov. 2001 (Kokubugata 3418).

*Excoecaria agallocha* L.

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 148).

*Glochidion ramifolium* J. R. & G. Forst.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, 1350 m alt., 1, Nov. 2000 (Sugimura 00-1090).

*Homalanthus nutans* (Forst.) Guillaumin

ANATOM. Top of Mt. Ukapaerek, 820 m alt., 5, Nov. 2001 (Iwashina 01-32).

*Macaranga dioica* Muell. Arg.

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1038).

*Phyllanthus* sp.

ESPIRITU SANTO. Between 2nd Camp and 1st Camp, Mt. Tabwemasana range, 700 m alt., 2, Nov. 2000 (Sugimura 00-1153).

## FRAGELLARIACEAE

*Fragellaria indica* L.

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-42).

## GESNERIACEAE

*Cyrtandra aneiteënsis* C. B. Clarke

ANATOM. Track from Anelghowhat to Mt. Ukapaerek, 180 m alt., 5, Nov. 2001 (Kokubugata 3430).

*Cyrtandra cymosa* J. R. & G. Forst.

TANNA. Near summit of Mt. Loanialu, 545 m alt., 19°29'90.1''S, 169°22'65.3''E, 7, Nov. 2001 (Kokubugata 3526, 3527, 3528 and 3529).



*Cyrtandra efatensis* Guillaumin

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1026). Between 2nd Camp and top of Mt. Tabwemasana, 1200 m alt., 1, Nov. 2000 (Sugimura 00-1088). Side of track from entrance to peak of Mt. Tabwemasana, 1000 m alt., 20, Oct. 2001 (Kokubugata 3348). Near peak of Mt. Tabwemasana, 1100 m alt., side of track from 2nd Camp to stream, 21, Oct. 2001 (Kokubugata 3368). Ibid., 1100 m alt., 100 m northeast from 2nd Camp, 21, Oct. 2001 (Kokubugata 3375 and 3376). Ibid., 1600 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3466). Track from 1st Camp to 2nd Camp, Mt. Tabwemasana range, 900 m alt., 25, Oct. 2001 (Kokubugata 3490). Butmas, 15°21'54.7''S, 166°58'58.5''E, 480 m alt., 28, Oct. 2001 (Kokubugata 3507 and 3510).

*Cyrtandra schizocalex* G. Gillett

ESPIRITU SANTO. Near summit of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3391 and 3392). Near peak of Mt. Tabwemasana, 1100 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3446). Ibid., 1430 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3449).

*Cyrtandra* sp.

ESPIRITU SANTO. Between 1st Camp and 2nd Camp, Mt. Tabwemasana range, 750 m alt., 30, Oct. 2000 (Sugimura 00-1066). Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1600 m alt., 1, Nov. 2000 (Sugimura 00-1106). Ibid., 1650 m alt., 1, Nov. 2000 (Sugimura 00-1111).

*Cyrtandra vesiculata* G. Gillett

ESPIRITU SANTO. Side of track from entrance to summit of Mt. Tabwemasana, 1000 m alt., 20, Oct. 2001 (Kokubugata 3349). Ibid., 900 m alt., 20, Oct. 2001 (Kokubugata 3356). Near summit of Mt. Tabwemasana, 1555 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3452).

## GOODENIACEAE

*Scaevola neo-ebudica* Guillaumin

ANATOM. Peak of Mt. Ukapaerek, 800 m alt., 5, Nov. 2001 (Kokubugata 3437).  
 ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1780 m alt., 1, Nov. 2000 (Sugimura 00-1123). Near peak of Mt. Tabwemasana, 1100 m alt, side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3443). Ibid., 1555 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3455).

*Scaevola sericea* Vahl

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 149).

## GRAMINEAE

*Centotheca lappacea* (L.) Desv.

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1033).

*Cyrtococcum oxyphyllum* (Steud.) Stapf

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1750 m alt., 1, Nov. 2000 (Sugimura 00-1141). Ibid., 1500 m alt., 1, Nov. 2000 (Sugimura 00-1209). Near peak of Mt. Tabwemasana, 1800 m alt., track from 2nd Camp to summit,

23, Oct. 2001 (Kokubugata 3460). Track from 1st Camp to 2nd Camp, Mt. Tabwemasana, 700 m alt.,  
25, Oct. 2001 (Kokubugata 3486).

*Ischaemum foliosum* Hack.

EFATE. Near Eton, 3 m alt., 17°46'92.6''S, 168°31'34.6''E, 3, Nov. 2001 (Kokubugata 3417).

*Stenotaphrum dimidiatum* (L.) Brongn.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1014).

**GUNNERACEAE**

*Gunnera macrophylla* Blume.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, 1350 m alt., 1, Nov. 2000  
(Sugimura 00-1092).

**GUTTIFERAE**

*Calophyllum inophyllum* L.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1016).

**HERNANDIACEAE**

*Hernandia peltata* Meissn.

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-11).

**HYDROCHARITACEAE**

*Enhalus acoroides* (L. f.) Royle

ERAKOR. Seashore of Erakor Island, near Port Vila, 17°46'34''S, 168°18'27''E, 12, Oct. 2001  
(Tanaka 3).

*Halophila ovalis* (R. Br.) Hook. f.

ANATOM. Seashore of Anelghowhat, -1~2 m alt., 20°14'07''S, 169°46'50''E, 6, Nov. 2001  
(Tanaka 176).

ESPIRITU SANTO. Seashore, in front of Hotel Santo, Luganville, 15°31'07''S, 167°10'07''E, 18,  
Oct. 2001 (Tanaka 8). Seashore, Sarunda, -0.5 m alt., 15°27'52''S, 167°12'49''E, 19, Oct. 2001  
(Tanaka 9).

*Thalassia hemprichii* (Ehrenb.) Aschers.

ANATOM. Seashore of Mystery Island, -1~2 m alt., 20°14'58''S, 169°46'26''E, 5, Nov. 2001  
(Tanaka 160). Seashore of Anelghowhat, -1~2 m alt., 20°14'07''S, 169°46'50''E, 6, Nov. 2001  
(Tanaka 171).

ERAKOR. Seashore of Erakor Island, near Port Vila, 17°46'34''S, 168°18'27''E, 12, Oct. 2001  
(Tanaka 1).

ESPIRITU SANTO. Seashore, in front of Hotel Santo, Luganville, 15°31'07''S, 167°10'07''E, 16,  
Oct. 2001 (Tanaka 6). Seashore, Sarunda, -0.5 m alt., 15°27'52''S, 167°12'49''E, 19, Oct. 2001  
(Tanaka 10). Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka  
26). Seashore, 3 km of Palikuro to Sarunda, -0.5 m alt., 15°29'53''S, 166°14'10''E, 27, Oct. 2001

(Tanaka 65).

#### LABIATAE

*Hyptis pectinata* (L.) Poit.

ESPIRITU SANTO. Siketket, in lowland forest, 300 m alt., 7, Nov. 2000 (Sugimura 00-1166).

#### LAURACEAE

*Cassytha triflora* E. Mey.

EFATE. Cafevari Beach, near Eton, 1 m alt., 17°46'77.0''S, 168°33'54.1''E, 3, Nov. 2001 (Kokubugata 3414).

#### LEGUMINOSAE

*Acacia simplex* (Sparman) Pedley

ESPIRITU SANTO. Luganville east, near Palikuro, 1 m alt., 27, Oct. 2001 (Iwashina 01-11).

*Acacia simplicifolia* (L. f.) Druce

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 155).

*Acacia spirorbis* Labill.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1011).

*Canavalia maritima* (Aubl.) Thouars

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 150).

*Desmodium canum* Schinz & Thellung

EFATE. Klems Hill, wayside, 160 m alt., 20, Oct. 2000 (Sugimura 00-1004).

*Desmodium umbellatum* (L.) DC.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1013).

*Intsia bijuga* Kuntze

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1021).

*Pterocarpus indicus* Willd.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 180 m alt., 29, Oct. 2000 (Sugimura 00-1054).

#### LEMNACEAE

*Lemna* sp.

EFATE. Brook near Tamate, 17°39'57''S, 168°14'39''E, 3, Nov. 2001 (Tanaka 147).

*Spirodela* sp.

ESPIRITU SANTO. Mouth of river, Matantas, 15°18'34''S, 166°56'45''E, 22, Oct. 2001 (Tanaka 24).

## LILIACEAE

*Smilax vitiensis* A. DC.

ESPIRITU SANTO. Roadside of Luganville to Butmas, 250 m alt., 15°20'43''S, 167°04'51''E, 28, Oct. 2001 (Tanaka 95).

## LOGANIACEAE

*Fagraea ceilanica* Thunb.

ESPIRITU SANTO. North peak of Mt. Tabwemasana, 1860 m alt., 1, Nov. 2000 (Iwashina 00-55). Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1750 m alt., 1, Nov. 2000 (Sugimura 00-1116). Near peak of Mt. Tabwemasana, 1800 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3465).

*Geniostoma rupestre* J. R. & G. Forst.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1770 m alt., 1, Nov. 2000 (Sugimura 00-1124).

## LORANTHACEAE

*Amyema aneityensis* (Guillaumin) Danser

ESPIRITU SANTO. Between 1st Camp and 2nd Camp, Mt. Tabwemasana range, 800 m alt., 30, Oct. 2000 (Sugimura 00-1067).

*Korthalsella platycaula* Engl.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1750 m alt., 1, Nov. 2000 (Sugimura 00-1138). North ridge of Mt. Tabwemasana, 1650 m alt., 1, Nov. 2000 (Iwashina 00-62).

## LYTHRACEAE

*Cuphea carthagenensis* (Jacq.) Macbr.

ESPIRITU SANTO. Butmas, in lowland forest, 500 m alt., 24, Oct. 2000 (Sugimura 00-1023).

*Pemphis acidula* Forst.

EFATE. Cafevari Beach, near Eton, 1 m alt., 17°46'77.0''S, 168°33'54.1''E, 3, Nov. 2001 (Kokubugata 3410).

## MALVACEAE

*Hibiscus rosa-sinensis* L.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 100 m alt., 29, Oct. 2000 (Sugimura 00-1049).

*Hibiscus tiliaceus* L.

ESPIRITU SANTO. Seashore, Saraoutou, 15°27'00''S, 167°12'19''E, 19, Oct. 2001 (Tanaka 15).

*Sida rhombifolia* L.

ESPIRITU SANTO. Siketket, in lowland forest, 300 m alt., 7, Nov. 2000 (Sugimura 00-1165).

**MARANTACEAE*****Donax cannaeformis*** (Forst. f.) Rolfe

ESPIRITU SANTO. Near Narango, edge of forest, 290 m alt., 8, Nov. 2000 (Sugimura 00-1182 and 00-1183).

**MELASTOMATACEAE*****Medinilla heteromorphophylla*** Guillaumin

ESPIRITU SANTO. Near Narango, edge of forest, 300 m alt., 8, Nov. 2000 (Sugimura 00-1184).

***Medinilla longicymosa*** Gibbs

ESPIRITU SANTO. Butmas, 540 m alt., 15°21'55''S, 166°58'59''E, 28, Oct. 2001 (Tanaka 110).

***Medinilla*** sp.

ESPIRITU SANTO. Butmas, 15°21'S, 166°05'E, 28, Oct. 2001 (Iwashina 01-17). Near Narango, edge of forest, 300 m alt., 8, Nov. 2000 (Sugimura 00-1188).

***Melastoma malabathricum*** L.

ANATOM. Top of Mt. Ukapaerek, 820 m alt., 5, Nov. 2001 (Iwashina 01-31).

EFATE. Forari Demonstration Forest Area, in lowland forest, 300 m alt., 14, Nov. 2000 (Sugimura 00-1204).

**MELIACEAE*****Dysoxylum gaudichaudianum*** (Juss.) Miq.

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1039).

***Xylocarpus moluccensis*** (Lam.) Roem.

ESPIRITU SANTO. Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka 35).

**MENYANTHACEAE*****Nymphoides indica*** (L.) Kuntze

ESPIRITU SANTO. Pond, Bellemoule, 15°34'49''S, 167°06'41''E, 23, Oct. 2001 (Tanaka 42).

**MONIMIACEAE*****Hedycarya dorstenioides*** A. Gray.

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1040).

**MORACEAE*****Ficus adenosperma*** Miq.

ANATOM. Foot of Mt. Nidwon Nelcau, 40 m alt., 5, Nov. 2001 (Kokubugata 3517).

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 250 m alt., 3, Nov. 2000 (Sugimura 00-1156). Vatthe Conservation Area, Matantas, 30 m alt., 15°09'80.6''S, 166°56'95.5''E,

29, Oct. 2001 (Kokubugata 3405). Near peak of Mt. Tabwemasana, track from 2nd Camp to summit, 15°20'64.8''S, 166°44'68.8''E, 23, Oct. 2001 (Kokubugata 3474).

*Ficus septica* Burm. f.

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-8).

*Ficus smithii* Home var. *robusta* Corner

ESPIRITU SANTO. Near Narango, edge of forest, 310 m alt., 8, Nov. 2000 (Sugimura 00-1192).

#### MYRISTICACEAE

*Myristica fatua* Foutt. var. *papuana* Markgraf

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1020).

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Iwashina 00-8). Near Narango, edge of forest, 310 m alt., 8, Nov. 2000 (Sugimura 00-1193).

#### MYRSINACEAE

*Maesa ambrymensis* Guillaumin

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1800 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3463). Near Tangoa Island, 1 m alt., 26, Oct. 2001 (Iwashina 01-6).

*Maesa* sp.

ESPIRITU SANTO. Butmas, in lowland forest, 520 m alt., 24, Oct. 2000 (Sugimura 00-1024). Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1069). Near Narango, edge of forest, 300 m alt., 8, Nov. 2000 (Sugimura 00-1185).

*Tapeinosperma scrobiculatum* (Seem.) Mez.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1127). Peren, edge of forest, 170 m alt., 7, Nov. 2000 (Sugimura 00-1174).

#### MYRTACEAE

*Metrosideros collina* (J. R. & G. Forst.) A. Gray

ESPIRITU SANTO. North ridge of Mt. Tabwemasana, 1800 m alt., 1, Nov. 2000 (Iwashina 00-56). Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1128). Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3442). Ibid., 1800 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3461 and 3462).

*Syzygium* sp.

ESPIRITU SANTO. Butmas, in lowland forest, 520 m alt., 24, Oct. 2000 (Sugimura 00-1025). Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1430 m alt., 1, Nov. 2000 (Sugimura 00-1096).

## ONAGRACEAE

*Ludwigia octovalvis* (Jacq.) Raven subsp. *sessiflora* (M. Micheli) Raven

ANATOM. Marsh of Anelghowhat, 20°13'54''S, 169°46'40''E, 6, Nov. 2001 (Tanaka 166).

## ORCHIDACEAE

*Bulbophyllum* sp.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1070).

*Dendrobium greenianum* P. J. Cribb & B. Lewis

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, 1200 m alt., 1, Nov. 2000 (Sugimura 00-1087).

*Dendrobium polysema* Schlechter

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1050 m alt., 31, Oct. 2000 (Sugimura 00-1077).

*Earina valida* Reichb. f.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1086).

*Glomera montana* Reichb. f.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1670 m alt., 1, Nov. 2000 (Sugimura 00-1115). Ibid., 1700 m alt., 1, Nov. 2000 (Sugimura 00-1140).

*Glomera papuana* Rolfe

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1650 m alt., 1, Nov. 2000 (Sugimura 00-1108).

*Glossorhyncha macdonaldii* Schltr.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1080). Ibid., 1700 m alt., 1, Nov. 2000 (Sugimura 00-1142).

*Liparis layardii* F. Muell. var. *santoensis* T. Hashimoto

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1205).

*Liparis* sp.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1050 m alt., 31, Oct. 2000 (Sugimura 00-1074).

*Mediocalcar paradoxum* (Kraenzl.) Schltr.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1081).

*Microtatorchis schlechteri* Garay

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1083).

*Vrydagzynea argyrotaenia* Schltr.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1135).

*Vrydagzynea solomonensis* Schltr.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1550 m alt., 1, Nov. 2000 (Sugimura 00-1104).

**PALMAE***Calamus vanuatuensis* J. L. Dowe

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-37).

**PANDANACEAE***Pandanus tectorius* Soland. ex Balf. f.

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-4 and 00-9).

**PASSIFLORACEAE***Passiflora foetida* L. var. *hispida* Killip

ESPIRITU SANTO. Side of track from entrance to peak of Mt. Tabwemasana, 900 m alt., 20, Oct. 2001 (Kokubugata 3355).

**PIPERACEAE***Macropiper latifolium* Miq.

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-7).

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3382). Stream at northeast of Butmas, 180 m alt., 15°20'71.9''S, 167°04'82.6''E, 28, Oct. 2001 (Kokubugata 3503).

*Peperomia pallidinervis* C. DC.

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1031). Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1430 m alt., 1, Nov. 2000 (Sugimura 00-1098). *Ibid.*, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1206). Side of track from entrance to peak of Mt. Tabwemasana, 900 m alt., 20, Oct. 2001 (Kokubugata 3354). Near peak of Mt. Tabwemasana, 1100 m alt., side of track from 2nd Camp to stream, 21, Oct. 2001 (Kokubugata 3369). Stream at northeast of Butmas, 180 m alt., 15°20'71.9''S, 167°04'82.6''E, 28, Oct. 2001 (Kokubugata 3509).

*Peperomia* sp.

ESPIRITU SANTO. Between 1st Camp and 2nd Camp, Mt. Tabwemasana range, 630 m alt., 30, Oct. 2000 (Sugimura 00-1064). Siketket, in lowland forest, 300 m alt., 7, Nov. 2000 (Sugimura 00-1169). Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-30 and 00-34).

*Piper aduncum* L.

ESPIRITU SANTO. Two km of Palikuro to Ngiraplanopo, 15°30'10''S, 167°14'57''E, 27, Oct. 2001 (Tanaka 75).

*Piper methysticum* Forst. f.

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-43). *Ibid.*, 540 m alt., 15°21'



55'S, 166°58'59'E, 28, Oct. 2001 (Tanaka 107).

*Piper miniatum* Blume

ESPIRITU SANTO. Near Narango, edge of forest, 280 m alt., 8, Nov. 2000 (Sugimura 00-1176).

*Piper* sp.

ESPIRITU SANTO. Butmas, 24, Oct. 2000 (Konishi 00-19 and 00-20).

*Piper wichmannii* C. DC.

ESPIRITU SANTO. Stream at northeast of Butmas, 180 m alt., 15°20'71.9'S, 167°04'82.6'E, 28, Oct. 2001 (Kokubugata 3498).

**POLYGALACEAE**

*Polygala paniculata* L.

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1037).  
Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3397).

*Polygala* sp.

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Konishi 00-27).

**PONTEDERIACEAE**

*Eichhornia crassipes* (Mart.) Solms-Laub.

ESPIRITU SANTO. Water taro farm, Second Blue Hole, 15°18'34'S, 167°09'04'E, 21, Oct. 2001 (Tanaka 17).

**POTAMOGETONACEAE**

*Potamogeton pectinatus* L.

EFATE. Teouma River, near the bridge from Port Vila to Teouma, -1 m alt., 17°45'58'S, 168°22'56'E, 3, Nov. 2001 (Tanaka 143).

*Potamogeton* sp.

ESPIRITU SANTO. Sarakata River, Luganville, 15°30'28'S, 167°09'04'E, 19, Oct. 2001 (Tanaka 13).

*Ruppia maritima* L. var. *pacifica* St. John & Fosberg f. *pacifica*

ANATOM. Mouth of river, Ivanhelhat, 20°14'05'S, 169°46'17'E, 6, Nov. 2001 (Tanaka 170).  
ESPIRITU SANTO. Wunamori, mouth of Adisone River, 15°35'00'S, 166°57'51'E, 26, Oct. 2001 (Tanaka 63).

**PROTEACEAE**

*Bleasdalea lutea* (Guillaumin) A. C. Smith & J. E. Haas

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1600 m alt., 1, Nov. 2000 (Sugimura 00-1131).

**RHAMNACEAE*****Colubrina asiatica*** (L.) Brongn.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 180 m alt., 29, Oct. 2000 (Sugimura 00-1055). Ibid., 250 m alt., 3, Nov. 2000 (Sugimura 00-1156).

**RHIZOPHORACEAE*****Bruguiera gymorrhiza*** (L.) Lam.

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 154).

ESPIRITU SANTO. Luganville east, near Palikuro, 1 m alt., 27, Oct. 2001 (Iwashina 01-14).

***Cerriops decandra*** (Griff) Ding Hou.

ESPIRITU SANTO. Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka 28).

***Rhizophora samoensis*** (Hochr.) Salvoza

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 158).

ESPIRITU SANTO. Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka 31).

***Rhizophora stylosa*** Griffith

ESPIRITU SANTO. Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka 30).

**ROSACEAE*****Rubus neo-ebudicus*** Guillaumin

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1207).

***Rubus roseifolius*** J. E. Sm. ex Baker

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3444). Ibid., 1470 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3450). Ibid., 1800 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3457).

**RUBIACEAE*****Bikkia tetrandra*** (Forst. f.) A. Rich.

EFATE. Cafevari Beach, near Eton, 1 m alt., 17°46'77.0''S, 168°33'54.1''E, 3, Nov. 2001 (Kokubugata 3412).

***Calycosia*** sp.

EFATE. Forari Demonstration Forest Area, in lowland forest, 300 m alt., 14, Nov. 2000 (Sugimura 00-1200).

ESPIRITU SANTO. Siketket, in lowland forest, 300 m alt., 7, Nov. 2000 (Sugimura 00-1171). Peren, edge of forest, 170 m alt., 7, Nov. 2000 (Sugimura 00-1172).

*Coprosma* sp.

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1700 m alt., 1, Nov. 2000 (Sugimura 00-1134).

*Gardenia tannaensis* Guillaumin

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 150 m alt., 29, Oct. 2000 (Sugimura 00-1052). Ibid., 180 m alt., 3, Nov. 2000 (Sugimura 00-1157).

*Geophila repens* (L.) I. M. Johnston

ANATOM. Track from Anelghowhat to Mt. Ukapaerek, 180 m alt., 5, Nov. 2001 (Kokubugata 3427).

ESPIRITU SANTO. Butmas, 500 m alt., 24, Oct. 2000 (Iwashina 00-3). Santo Forest Research Station, Rotal, 135 m alt., 15°15'41.6''S, 167°05'84.2''E, 29, Oct. 2001 (Kokubugata 3407).

*Hedyotis* sp.

EFATE. Pang Pang, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1010).

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1650 m alt., 1, Nov. 2000 (Sugimura 00-1113).

*Hedyotis strigulosa* Bartling ex P. de Candolle var. *parvifolia* (Hook. & Arn.) T. Yamazaki

EFATE. Near Eton, 3 m alt., 17°46'92.6''S, 168°31'34.6''E, 3, Nov. 2001 (Kokubugata 3416).

*Ixora asme* Guillaumin

ANATOM. Track to summit of Mt. Ukapaerek, 400 m alt., 5, Nov. 2001 (Kokubugata 3511).

*Ixora collina* Beauvis.

ESPIRITU SANTO. Kerepua, coconut palm plantation, 10 m alt., 28, Oct. 2000 (Sugimura 00-1043).

*Ophiorrhiza laxa* A. Gray

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1500 m alt., 1, Nov. 2000 (Sugimura 00-1129). Side of track from entrance to peak of Mt. Tabwemasana, 900 m alt., 20, Oct. 2001 (Kokubugata 3357). Track from 1st Camp to 2nd Camp, Mt. Tabwemasana range, 25, Oct. 2001 (Kokubugata 3478). Ibid., side of stream, Mt. Tabwemasana range, 700 m alt., 25, Oct. 2001 (Kokubugata 3485). Ibid., 1100 m alt., 25, Oct. 2001 (Kokubugata 3497).

*Pavetta opulina* DC.

ESPIRITU SANTO. Between 2nd Camp and 1st Camp, Mt. Tabwemasana range, 1000 m alt., 2, Nov. 2000 (Sugimura 00-1151). Track from 1st Camp and 2nd Camp, Mt. Tabwemasana range, 700 m alt., 25, Oct. 2001 (Kokubugata 3488).

*Psychotria aneityensis* Guillaumin

ESPIRITU SANTO. Near Narango, edge of forest, 290 m alt., 8, Nov. 2000 (Sugimura 00-1179). Ibid., 330 m alt., 8, Nov. 2000 (Sugimura 00-1198).

*Psychotria fosteri* C. W. Hamilton

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 20 m alt., 28, Oct. 2000 (Sugimura 00-1046).

*Psychotria milnei* (A. Gray) K. Schumann

ANATOM. Mt. Ukapaerek, 600 m alt., 5, Nov. 2001 (Iwashina 01-39).

ESPIRITU SANTO. Between 1st Camp and 2nd Camp, Mt. Tabwemasana range, 700 m alt., 30, Oct. 2000 (Sugimura 00-1065). Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1070 m alt., 31, Oct. 2000 (Sugimura 00-1079). Near peak of Mt. Tabwemasana, 1200 m alt., track from

2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3469). Stream at northeast of Butmas, 180 m alt., 15°20'71.9''S, 167°04'82.6''E, 28, Oct. 2001 (Kokubugata 3506).

*Psychotria* sp.

ESPIRITU SANTO. Siketket, in lowland forest, 300 m alt., 7, Nov. 2000 (Sugimura 00-1168).

*Spermacoce laevis* Lam.

EFATE. Klems Hill, wayside, 160 m alt., 20, Oct. 2000 (Sugimura 00-1006).

*Spermacoce* sp.

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1071).

*Tarenna efatensis* Guillaumin

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1076).

*Timonius affinis* A. Gray

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1073).

#### RUTACEAE

*Evodia triphylla* DC.

ANATOM. Summit of Mt. Ukapaerek, 800 m alt., 5, Nov. 2001 (Kokubugata 3435).

*Melicope* sp.

ESPIRITU SANTO. Between 2nd Camp and 1st Camp, Mt. Tabwemasana range, 900 m alt., 2, Nov. 2000 (Sugimura 00-1148). Ibid., 790 m alt., 2, Nov. 2000 (Sugimura 00-1149).

*Murraya paniculata* (L.) Jack.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 250 m alt., 30, Oct. 2000 (Sugimura 00-1058).

#### SANTALACEAE

*Santalum austro-caledonicum* Vieill.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 200 m alt., 29, Oct. 2000 (Sugimura 00-1057).

#### SAPOTACEAE

*Mimusops elengi* L.

ERAKOR. Erakor Island, near Port Vila, seashore, 2 m alt., 20, Oct. 2000 (Sugimura 00-1012).

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 150 m alt., 29, Oct. 2000 (Sugimura 00-1051).

*Pouteria costata* Dubard

EFATE. Pang Pang, 21, Oct. 2000 (Konishi 00-13).

**SOLANACEAE***Solanum americanum* Mill.

ESPIRITU SANTO. Butmas, in lowland forest, 24, Oct. 2000 (Sugimura 00-1036).

*Solanum seafortianum* Andr.

ESPIRITU SANTO. Peren, edge of forest, 170 m alt., 7, Nov. 2000 (Sugimura 00-1173).

*Solanum torvum* Buch.-Ham. ex Wall.

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m south-west from 2nd Camp, 22, Oct. 2001 (Kokubugata 3399). Stream at northeast of Butmas, 180 m alt., 15°20'71.9''S, 167°04'82.6''E, 28, Oct. 2001 (Kokubugata 3499). Two km of Palikuro to Ngiraplanopo, 15°30'10''S, 167°14'57''E, 27, Oct. 2001 (Tanaka 79).

**SONNERATIACEAE***Sonneratia caseolaris* (L. f.) Engl.

ANATOM. Seashore of Anadwei, 20°14'16''S, 169°48'03''E, 5, Nov. 2001 (Tanaka 157).

ESPIRITU SANTO. Seashore, Palikuro, -0.5 m alt., 15°28'58''S, 167°14'47''E, 22, Oct. 2001 (Tanaka 32).

**STERCULIACEAE***Kleinhovia hospita* L.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 20 m alt., 28, Oct. 2000 (Sugimura 00-1045).

**TACCACEAE***Tacca leontopetaloides* (L.) Kuntze

ESPIRITU SANTO. Seashore, in front of Tangoa Island, 15°35'25''S, 166°58'54''E, 26, Oct. 2001 (Tanaka 60).

**THEACEAE***Eurya vitiensis* A. Gray

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1650 m alt., 1, Nov. 2000 (Sugimura 00-1109 and 00-1112). Ibid., 1670 m alt., 1, Nov. 2000 (Sugimura 00-1125). Ibid., 1500 m alt., 1, Nov. 2000 (Sugimura 00-1208).

**TILIACEAE***Grewia malococca* L. f.

EFATE. Siviri, coconut palm plantation, 50 m alt., 20, Oct. 2000 (Sugimura 00-1007).

## ULMACEAE

*Trema orientalis* (L.) Blume

ESPIRITU SANTO. Between 2nd Camp and 1st Camp, Mt. Tabwemasana range, 700 m alt., 2, Nov. 2000 (Sugimura 00-1154).

## URTICACEAE

*Boehmeria platyphylla* D. Don

ESPIRITU SANTO. Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3395). Ibid., 1450 m alt., track from 2nd Camp to summit, 23, Oct. 2001 (Kokubugata 3468).

*Elatostema beccarii* H. E. Schroet.

ESPIRITU SANTO. Near Narango, edge of forest, 290 m alt., 8, Nov. 2000 (Sugimura 00-1180). Side of track from entrance to peak of Mt. Tabwemasana, 600 m alt., 20, Oct. 2001 (Kokubugata 3360). Ibid., 450 m alt., 20, Oct. 2001 (Kokubugata 3365). Near peak of Mt. Tabwemasana, 1100 m alt., side of track from 2nd Camp to stream, 21, Oct. 2001 (Kokubugata 3371).

*Elatostema macrophyllum* Brongn.

ESPIRITU SANTO. Near track entrance to summit, Mt. Tabwemasana, 19, Oct. 2001 (Kokubugata 3343).

*Leucosyke australis* Unruh

ANATOM. Mt. Ukapaerek, 150 m alt., 5, Nov. 2001 (Iwashina 01-42). Foot of Mt. Nidwon Nelcau, 40 m alt., 5, Nov. 2001 (Kokubugata 3515).

ESPIRITU SANTO. Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1072). Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3398).

*Maoutia diversifolia* Blume

ESPIRITU SANTO. Between 2nd Camp and top of Mt. Tabwemasana, on the north ridge of Mt. Tabwemasana, 1560 m alt., 1, Nov. 2000 (Sugimura 00-1105). Near peak of Mt. Tabwemasana, 1100 m alt., side of stream at 200 m southwest from 2nd Camp, 22, Oct. 2001 (Kokubugata 3387).

*Pipturus argenteus* (Forst. f.) Wedd.

EFATE. Near Teouma Bridge on Teouma River, 3 m alt., 17°46'S, 168°23'E, 3, Nov. 2001 (Kokubugata 3409).

ESPIRITU SANTO. Stream at northeast of Butmas, 180 m alt., 15°20'71.9"S, 167°04'82.6"E, 28, Oct. 2001 (Kokubugata 3501).

HIDEAWAY. Hideaway Island, north of Port Vila, seashore, 1 m alt., 12, Nov. 2000 (Sugimura 00-1199).

IRIRIKI. Iririki Island, near Port Vila, 5 m alt., 19, Oct. 2000 (Sugimura 00-1002).

## VERBENACEAE

*Avicennia alba* Blume

ESPIRITU SANTO. Seashore, Palikuro, -0.5 m alt., 15°28'58"S, 167°14'47"E, 22, Oct. 2001

(Tanaka 33).

*Avicennia marina* (Forst.) Vierh. var. *australasica* (Walp.) Mold.

ESPIRITU SANTO. Luganville east, near Palikulo, 1 m alt., 27, Oct. 2001 (Iwashina 01-15).

*Premna corymbosa* (Burm. f.) Rottb. & Willd.

ESPIRITU SANTO. Along Kerepua River, Mt. Tabwemasana range, 200 m alt., 29, Oct. 2000 (Sugimura 00-1056).

*Vitex negundo* L.

ESPIRITU SANTO. Track from 1st Camp to 2nd Camp, Mt. Tabwemasana, 25, Oct. 2001 (Kokubugata 3477).

*Vitex trifolia* L.

ESPIRITU SANTO. Mouth of Sarakata River, Luganville, 15°31'20''S, 167°09'46''E, 25, Oct. 2001 (Tanaka 47).

#### VIOLACEAE

*Melicytus fasciger* Gillespie

ESPIRITU SANTO. Butmas, in lowland forest, 530 m alt., 24, Oct. 2000 (Sugimura 00-1035).  
Between 2nd Camp and Nokovula, Mt. Tabwemasana range, 1000 m alt., 31, Oct. 2000 (Sugimura 00-1068).

#### ZINGIBERACEAE

*Alpinia purpurata* (Vieill.) K. Schum.

ANATOM. Foot of Mt. Nidwon Nelcau, 120 m alt., 5, Nov. 2001 (Kokubugata 3519).

ESPIRITU SANTO. Near track entrance to peak of Mt. Tabwemasana, 19, Oct. 2001 (Kokubugata 3344).

#### Acknowledgements

The 2000 and 2001 expeditions to Vanuatu were financially supported by Monbu-Kagaku-sho International Scientific Research Program, No. 12575013, from the Ministry of Education, Culture, Sports, Science and Technology in Japan.