

[Chem. Pharm. Bull.]
20(7)1582-1584(1972)

UDC 547.94.08 : 547.597.08

A New Phytochemical Survey of Malaya. III.^{1,2)} Chemical Screening

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(Received January 21, 1972)

Continuing our screening of Malayan plants for presence alkaloids, saponins, and steroids and triterpenes^{1,2)} we report here the results obtained from 187 species belonging to 69 families and 155 genera. Of these 42 species gave positive tests for alkaloids, 71 species for saponins and 56 species for steroids and triterpenes.

Collection of plant materials, preparation of extracts and chemical tests were carried out as described earlier.¹⁾

TABLE I. Screening Tests

Family	Species	Chemical tests for				Family	Species	Chemical tests for			
		Part	Alkaloids	Saponins	Steroids-triterpenes			Part	Alkaloids	Saponins	Steroids-triterpenes
Acanthaceae	<i>Asystasia coromandeliana</i> NEES	W	—	—	+	Bombacaceae	<i>Durio griffithii</i> (MAST.) BAKH.	S L	—	—	+
	<i>Filetia glabra</i> RIDL.	W	1+	2+	+		<i>Durio testudinatum</i> BECC.	S L	—	1+	+
	<i>Lepidagathis longifolia</i> WIGHT	W	2+	—	—	Burseraceae	<i>Canarium acutifolium</i> (DC.) MERR. var. <i>aemulans</i> (LAUT.) LEENH.	S L	—	—	+
	<i>Peristrophe acuminata</i> NEES	W	—	—	—		<i>Canarium commune</i> L.	L, S	—	—	—
	<i>Pseudeanthemum graciliflorum</i> RIDL.	W	—	1+	—		<i>Protium javanicum</i> BURM. F.	S L	—	1+	—
	<i>Stauvogyne setigera</i> KUNTZE	W	—	—	+		<i>Santiria rubiginosa</i> BL.	L, S	—	—	—
	<i>Thunbergia natalensis</i> HK. F.	W	1+	—	—	Caesalpiniaceae	<i>Bauhinia wrayi</i> PRAIN.	W	—	—	+
Amaranthaceae	<i>Alternanthera triandra</i> LEMK.	W	—	2+	—		<i>Cassia fruticosa</i> MILL.	L, S	—	—	—
	<i>Cyathula prostrata</i> (L.) BL.	W	—	2+	—		<i>Haematoxylum campechianum</i> L.	W	—	—	—
Anacardiaceae	<i>Anacardium occidentale</i> L.	L, S	—	—	—		<i>Savaca declinata</i> (JACK) MIQ.	S L	1+	—	—
	<i>Buchanania lucida</i> BL.	S L	—	1+	—		<i>Savaca kunstleri</i> PRAIN.	S L	—	1+	—
	<i>Mangifera caesia</i> JACK ex WALL.	S L	2+	1+	—		<i>Savaca macroptera</i> MIQ.	L, S	—	—	—
	<i>Mangifera foetida</i> LOUR.	L, S	—	—	+	Campanulaceae	<i>Pratia begoniaefolia</i> LIDL.	W	1+	—	+
	<i>Mangifera indica</i> L.	S L	—	1+	—	Caprifoliaceae	<i>Sambucus javanica</i> REINW. ex BL.	S L	—	1+	—
Anisophylleaceae	<i>Anisophyllea disticha</i> BAILL.	S L	—	1+	+		<i>Viburnum sambucinum</i> BL.	L, S	—	—	—
Annonaceae	<i>Goniothalamus ridleyi</i> KING	S L	2+	—	—	Capparaceae	<i>Cleome viscosa</i> L.	W	—	—	—
	<i>Mitrophora javanica</i> BAKH.	L, S	—	—	—		<i>Crateva lophosperma</i> KURZ.	S L	—	2+	+
Apocynaceae	<i>Cerbera manghas</i> L.	L, S	—	—	+	Casuarinaceae	<i>Casuarina equisetifolia</i> FORST.	L, S	—	1+	—
	<i>Chilocarpa costatus</i> MIQ.	S L	—	—	+	Clusiaceae	<i>Garcinia hombroniana</i> PIERRE	S L	—	2+	—
	<i>Kopsia singapurensis</i> RIDL.	S L	3+ 1+	—	—		<i>Mesua ferrea</i> L.	S L	—	—	+
Araliaceae	<i>Arthrophyllum diversifolium</i> BL.	S L	—	—	+	Combretaceae	<i>Terminalia catappa</i> L.	L, S	—	—	+
	<i>Schefflera junghuniana</i> (MIQ.) HARMS	S L	1+ —	2+ —	—		<i>Quisqualis indica</i> L.	W	—	—	+
	<i>Schefflera subulata</i> RIDL.	S L	— —	— 2+	—	Commelinaceae	<i>Cyanotis cristata</i> ROEM. & SCHULTES	W	—	—	+
Asclepiadaceae	<i>Asclepias curassavica</i> L.	W	—	—	—	Compositae	<i>Erechthites valerianifolia</i> DC.	W	—	—	—
	<i>Sarcobolus globosus</i> WALL.	W	—	—	+						
	<i>Secamone micrantha</i> (DCNE) DCNE	W	—	—	+						
Balsaminaceae	<i>Impatiens curtisii</i> HK. F.	W	—	—	+						
	<i>Impatiens scortechinii</i> HOOK. FIL.	W	—	—	—						

1) J. Carrick, K.C. Chan and H.T. Cheung, *Chem. Pharm. Bull.* (Tokyo), 16, 2436 (1968).2) K.C. Chan and L.E. Teo, *Chem. Pharm. Bull.* (Tokyo), 17, 1284 (1969).

3) Location: Kuala Lumpur, Malaysia.

Family	Species	Chemical tests for			Family	Species	Chemical tests for		
		Part	Alkaloids	Saponins			Steroids-triterpenes	Part	Alkaloids
Convolvulaceae	<i>Mikania cordata</i> (BURM. F.) B.L. ROBINSIN	W	—	—	Lythraceae	<i>Cuphea ignea</i> DC.	W	—	—
	<i>Spilanthes iabadiensis</i> A.H. MOORE	W	—	—	<i>Lagerstroemia floribunda</i> JACK	L, S	—	—	
	<i>Synedrella nodiflora</i> (L.) GAERTN.	W	—	—	Malvaceae	<i>Althaea rosea</i> (L.) CAP.	W	—	—
	<i>Merremia mammosa</i> (LOUR.) HALLIER f.	L, S	—	—	<i>Hibicus grewiaefolius</i> HASSK.	L, S	—	—	
	<i>Merremia tridentata</i> HALLIER	W	—	—	<i>Hibicus lunarifolius</i> WILLD.	S, L	—	—	
	<i>Merremia tridentata</i> (L.) HALLIER f. ssp. <i>hastata</i> (HALL. F.) OOSTATR.	W	—	—	Melastomataceae	<i>Dissochaeta celebica</i> BL.	S, L	—	—
	Dilleniaceae	<i>Tetracera indica</i> (HOULT. ex CHRISTM. PANZ.) MERR.	W	—	—	<i>Memeclon coeruleum</i> JACK	S, L	—	—
	Dipterocarpaceae	<i>Dryobalanops oblongifolia</i> DYER	L, S	—	—	<i>Pternandra coerulea</i> JACK	L, S	—	—
		<i>Vatica stipulata</i> RIDL.	S, L	—	—	<i>Sarcopyramis nepalensis</i> WALL.	W	—	—
	Elaeocarpaceae	<i>Acronodia punctata</i> BL.	S, L	—	—	<i>Sonerila tenuifolia</i> BL.	W	—	—
Ericaceae	<i>Gaultheria leucocarpa</i> Bt.	L, S	—	—	Meliaceae	<i>Dysoxylum cauliflorum</i> HIERN	S, L	1+	—
Euphorbiaceae	<i>Antidesma cuspidatum</i> MUELL.-ARG.	W	1+	—	<i>Sandoricum Koetjape</i> (BURM. F.) MERR.	S, L	—	—	
	<i>Baccaurea reticulata</i> Hk. f.	S, L	—	—	Menispermaceae	<i>Pericampylus glaucus</i> (LMK) MERR.	W	1+	—
	<i>Bridelia minutiflora</i> Hk. f.	L, S	—	—	Mimosaceae	<i>Entada phaseoloides</i> (L.) MERR.	L, S	—	—
	<i>Bridelia stipularis</i> (L.) BL.	S, L	1+	1+	<i>Leucaena leucocephala</i> (LMK) De Wit	L, S	—	—	
	<i>Claoxylon polot</i> (BURM. F.) MERR.	L, S	—	—	<i>Pithecellobium microcarpum</i> BENTH.	L, S	—	—	
	<i>Croton hirtus</i> L'HERIT.	W	—	—	Moraceae	<i>Ficus glomerata</i> ROXB.	L, S	—	—
	<i>Endospermum malaccense</i> MUELL.	S, L	—	—	<i>Ficus viridicarpa</i> (cf. CORNER)	S, L	—	—	
	<i>Epiprinus malayanus</i> GRIFF.	S, L	—	—	Myrsinaceae	<i>Embelia javanica</i> DC.	W	—	—
	<i>Euphorbia pulcherrima</i> WILLD. ex KLOTZSCH	L, S	—	—	Myrtaceae	<i>Eugenia densiflora</i> DUTHIE	S, L	—	—
	<i>Glochidion superbum</i> BAILL.	S, L	—	—	<i>Eugenia fusiformis</i> DUTHIE	S, L	—	—	
	<i>Macaranga heynei</i> I.M. JOHNSTON	S, L	—	—	<i>Eugenia papillosa</i> DUTHIE	L, S	—	—	
	<i>Mallotus philippinensis</i> MUELL.-ARG.	S, L	—	—	<i>Eugenia spicata</i> (cf. CORNER)	L, S	—	—	
Fagaceae	<i>Castanopsis inermis</i> BENTH. & HOOK. FIL.	S, L	—	—	Oleaceae	<i>Olea maritima</i> WALL. ex DC.	S, L	1+	1+
	<i>Quercus lamponga</i> MIQ.	S, L, F	—	—	Onagraceae	<i>Ludwigia octovalvis</i> (Jacq.) RAVEN ssp. <i>sessiliflora</i> (MICH.) RAVEN	W	—	—
Ficoidaceae	<i>Sesuvium portulacastrum</i> (L.) L.	W	2+	—	Oxalidaceae	<i>Connaropsis monophylla</i> PLANCH.	L, S	—	—
Flacourtiaceae	<i>Homalium caryophyllaceum</i> (Z. & M.) BENTH.	S, L	1+	—	<i>Oxalis barrelieri</i> L.	W	—	—	
	<i>Homalium ramosii</i> MERR.	L, S	—	—	Papilionaceae	<i>Derris multiflora</i> BENTH.	S, L	1+	—
Flagellariaceae	<i>Susum malayanum</i> HOOK.	W	—	—	<i>Spatholobus ferrugineus</i> (ZOLL.) BENTH.	L, S	—	—	
Geseriaceae	<i>Cyrtandromoea acuminata</i> BTH. & HK.	S, L	1+	—	<i>Tephrosia purpurea</i> (L.) PERS.	W	—	—	
	<i>Didissandra filicina</i> RIDL.	W	—	—	Piperaceae	<i>Piper stylosum</i> MIQ.	W	2+	—
	<i>Didymocarpus crinita</i> JACK	L, S	—	—	Polygalaceae	<i>Xanthophyllum excelsum</i> (Bt.) MIQ.	S, L	2+	—
	<i>Didymocarpus hispida</i> RIDL.	W	1+	2+	Polygonaceae	<i>Polygonum barbatum</i> L.	W	—	—
Hernandiaceae	<i>Illigera appendiculata</i> BL.	W	—	—	<i>Polygonum chinense</i> L.	W	—	—	
Hippocrateaceae	<i>Salacia macrophylla</i> BL.	S, L	—	—	Rhamnaceae	<i>Gouania javanica</i> MIQ.	S, L	1+	3+
Labiatae	<i>Coleus Blumei</i> BENTH.	W	—	—	<i>Smythea lanceata</i> (TUL.) SUMMERE.	S, L	1+	—	
Lauraceae	<i>Cinnamomum iners</i> REINW. ex BL.	S, L	—	—	Rhizophoraceae	<i>Pellacalyx axillaris</i> KORTH.	S, L	—	—
	<i>Lindera pentantha</i> K. & V.	S, L	1+	—	Rosaceae	<i>Rubus moluccanus</i> L. var. <i>hasskarlii</i> (MIQ.) BACK.	W	—	—
Liliaceae	<i>Dracaena umbriatica</i> RIDL.	W	—	—	Rubiaceae	<i>Argostemma involucreatum</i> HEMSL. var. <i>glabrum</i>	W	—	—
	<i>Smitax calophylla</i> WALL.	W	—	—					
Joranthaceae	<i>Loranthus ferrugineus</i> ROXB.	W	—	—					
	<i>Loranthus pentandrus</i> L.	W	—	—					

Family	Species	Chemical tests for			Family	Species	Chemical tests for					
		Part	Alkaloids	Saponins			Steroids-triterpenes	Part	Alkaloids	Saponins	Steroids-triterpenes	
Rutaceae	<i>Coffea canephora</i> PIERRE EX FROEHNER var. <i>robusta</i> (LINDEN EX DE WILDEM.) CHEVALIER	S	—	—	+	Saurauaceae	<i>Saurauia blumiana</i> BENN.	S	—	—	+	
	<i>Coffea canephora</i> PIERRE EX FROEHNER var. <i>robusta</i> (LINDEN EX DE WILDEM.) CHEVALIER	L	1+	—	—		<i>Saurauia bracteosa</i> DC.	L, S	—	—	—	
	<i>Coptosapelta tomentosa</i> (Bl.) VAL. EX K. HEYNE	S	1+	2+	+	Scrophularaceae	<i>Adenosma coerulea</i> R. BR.	W	—	—	—	
	<i>Diodia sarmentosa</i> SWARTZ	W	—	—	—		<i>Limnophila villosa</i> BL.	W	—	2+	+	
	<i>Gardenia cavinata</i> WALL.	L, S	—	1+	—		<i>Lindernia procumbens</i> (KROCK) PHILCOX	W	—	—	—	
	<i>Gardenia tubifera</i> WALL.	L, S	—	2+	—		<i>Torenia polygonoides</i> BENTH.	W	—	—	—	
	<i>Greenia corymbosa</i> K. SCHUM.	S	—	2+	—		<i>Vandellia scabra</i> BENTH.	W	—	—	—	
	<i>Hedyotis nitida</i> W. & A.	W	—	—	+	Solanaceae	<i>Erigmansia suaveolens</i> (HUMB. & BONPL. EX WILLD.) BERCHT. & PRESL	S	1+	2+	—	
	<i>Lasianthus furcatus</i> (Miq.) BREMEK.	S	—	1+	—		Sterculiaceae	<i>Melochia corchorifolia</i> L.	W	1+	—	—
	<i>Mussaenda angustisejala</i> RIDL.	W	—	—	—			<i>Sterculia parviflora</i> ROXB.	S	1+	—	—
	<i>Paederia foetida</i> L.	S	—	—	+	Symlocaceae	<i>Symplocos fasciculata</i> ZOLL.	S	—	2+	—	
	<i>Paederia scandens</i> (LOUR.) MERR.	W	—	—	+		Urticaceae	<i>Stoetia elongata</i> KOORD.	L, S	—	—	—
	<i>Psychotria angulata</i> KORTH.	S	—	1+	+	Verbenaceae		<i>Callicarpa rebella</i> LINDL.	S	—	—	+
	<i>Psychotria sarmentosa</i> BL.	W	—	1+	—		<i>Clerodendrum myrmecophilum</i> RIDL.	W	1+	1+	—	
	<i>Randia densiflora</i> (WALL.) BENTH.	L, S	—	—	—		<i>Clerodendrum wallichii</i> MERR.	S	1+	—	—	
	<i>Randia Scortechinii</i> KING	S	1+	—	—		<i>Duvalia erecta</i> L.	S	—	3+	+	
	<i>Tarenna fragrans</i> (Bl.) K. & V.	S	2+	—	—		<i>Peronema canscens</i> JACK	L	—	1+	—	
	<i>Timonius wallichianus</i> VALETON	L	—	1+	—		<i>Vitex quinata</i> (LOUR.) F.N. WILL.	L, S	—	—	—	
	<i>Uncaria Roxburghiana</i> KORTH.	S	2+	—	—		<i>Vitex vestita</i> WALL.	L, S	—	—	—	
	<i>Urophyllum macrophyllum</i> KORTH.	S	—	2+	—		Violaceae	<i>Rinorea anguifera</i> KUNTZE	S	—	1+	—
	<i>Urophyllum macrophyllum</i> KORTH.	L	1+	—	—			<i>Viola serpens</i> WALL.	W	—	—	—
	<i>Micromelum minutum</i> (FORSTER F.) W. & A.	S	2+	—	+			Vitaceae	<i>Cayratia geniculata</i> (Bl.) GAGN.	S	—	—
	<i>Zanthoxylum myriacanthum</i> WALL.	S	1+	—	—	<i>Tetrastigma hookeri</i> (LAWS.) PLANCH.	S		1+	—	—	
<i>Allophylus cobbe</i> (L.) RAEUSCH. var. <i>villosus</i> (cf. CORNER)	L	—	—	+	<i>Vitis cantoniensis</i> SEEM.	W	—		1+	—		
<i>Erioglossum edule</i> Bl.	S	—	2+	—	<i>Vitis lanceolaria</i> (ROXB.) WALL.	L, S	—		—	—		
<i>Erioglossum rubiginosum</i> (ROXB.) Bl.	S	—	1+	+	<i>Vitis macrostachya</i> MIQ.	L, S	—		—	—		
<i>Erioglossum rubiginosum</i> (ROXB.) Bl.	L	—	3+	—	<i>Vitis repens</i> WIGHT & ARNOTT	W	—		—	+		
<i>Mischocarpus sudaicus</i> KING	L, S	—	1+	—								
<i>Palaquium gutta</i> (Hk. f.) BAILL.	L, S	—	—	—								
<i>Palaquium hexandrum</i> K. & GAMBLE	S	—	—	+								
<i>Palaquium hexandrum</i> K. & GAMBLE	L	—	—	—								

abbreviations-plant parts: S=stem; L=leaf; F=fruit; W=whole plant

The same visual assessment as stated in the previous publication¹⁾ was adopted.

Acknowledgement The authors wish to thank the Ministry of Overseas Development of the United Kingdom for a generous grant, Mr. G. Pachiaper for assistance in the survey.