



The Marvel Thumbikulama Cascade

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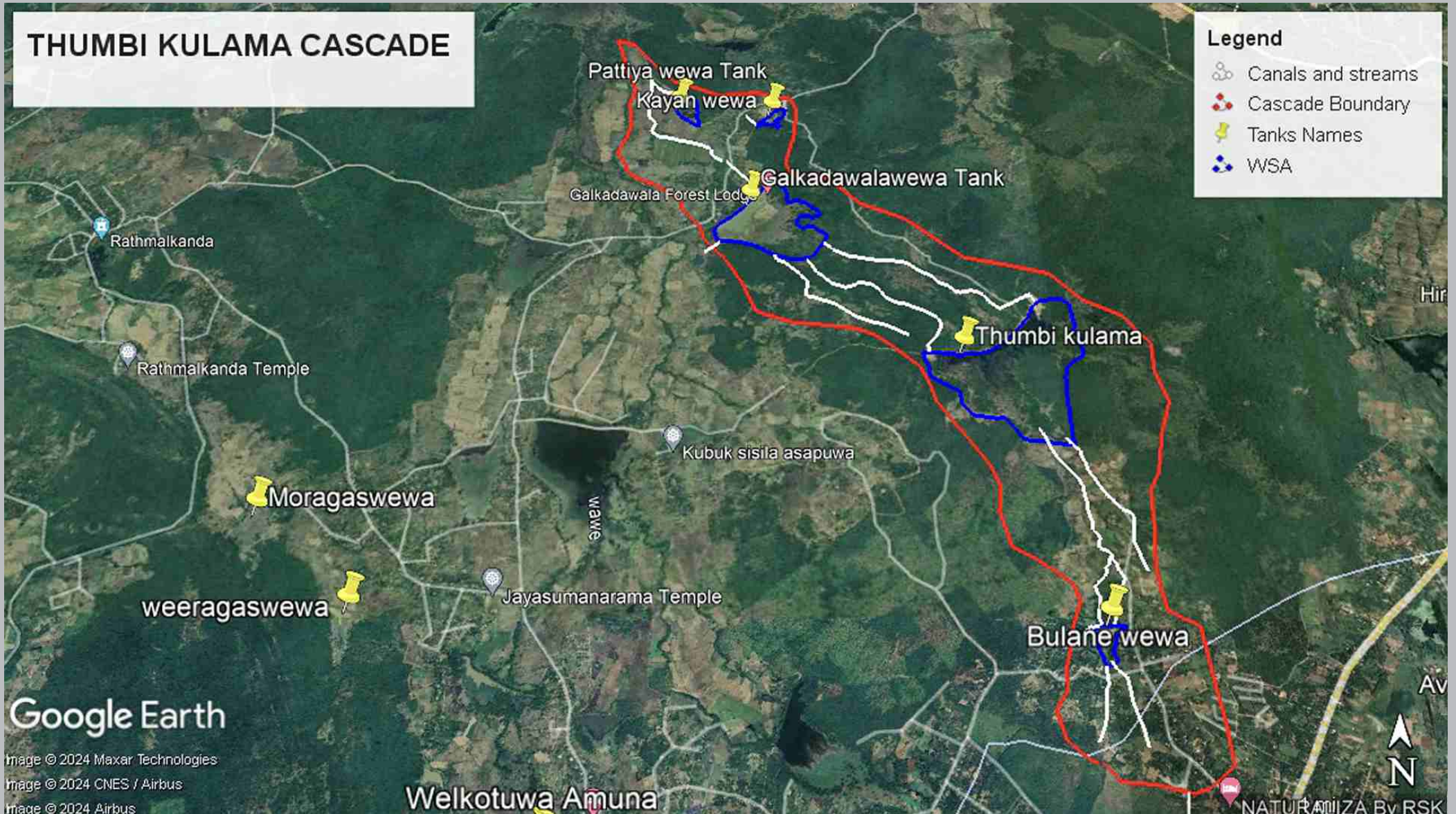
Camera Equipment

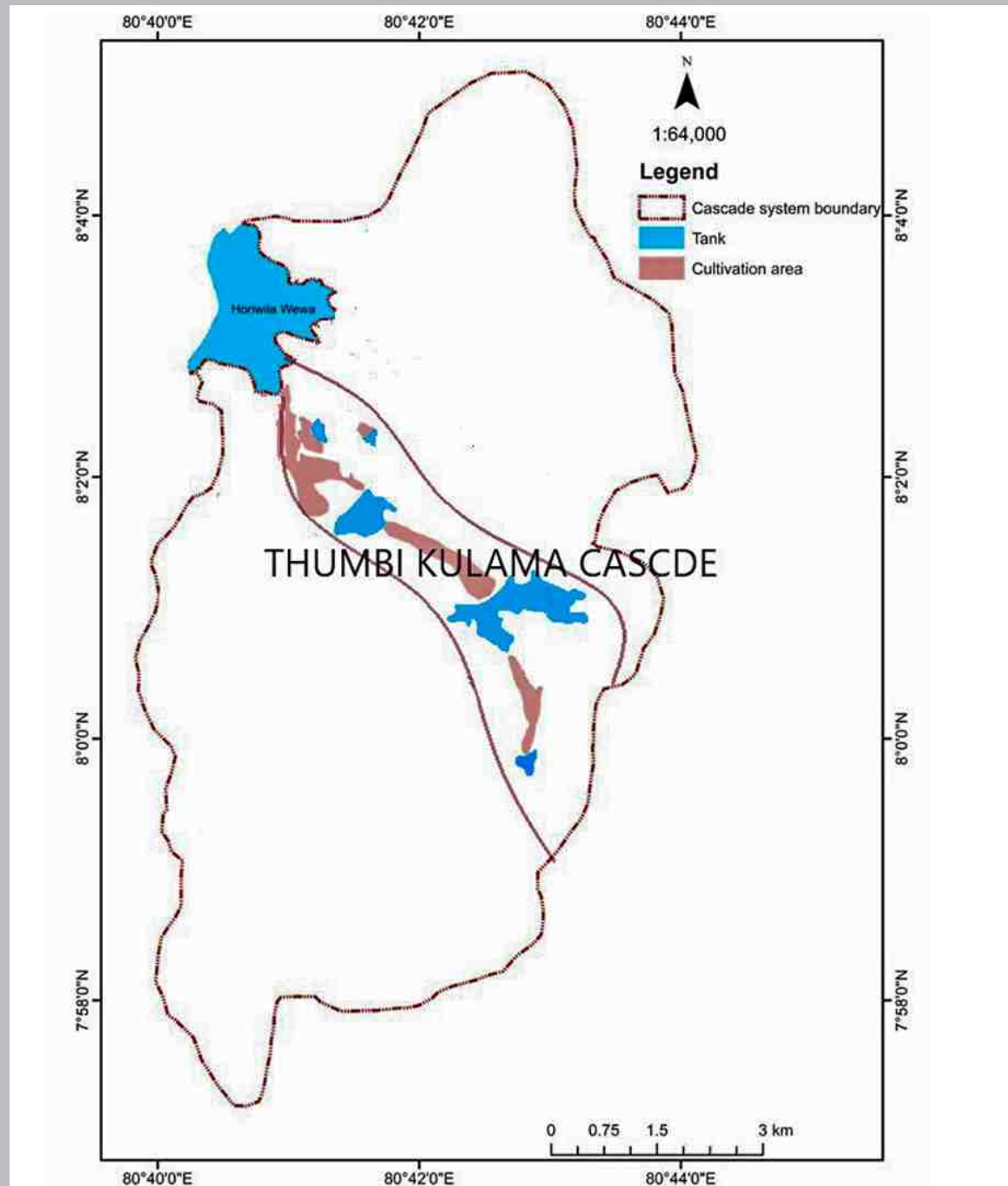
Mr. Ranga Edirisinghe

Making the dryzone into
evergreen
Nourishing thousands of tanks
Feeding millions of people
Being the cradle of Sri Lankan
Civilization
"Malwathu Oya"
You have been our lifeblood
We love you,
We care you.

වියළි රජරට සදාහරිත කරවිනි
පිරවු වහා වාපිනි ...
අටුකොටු පිරවු සෙවණාභයෙන් මුසපත්ව ..
නානු දාගැලි වන්දිව වනිනි වසවු
අධින වානව ගිණිවාරයකි ..
සියවසි දාගැලි පුරාවට වරාපවන කරවු
අදරණිය 'වල්වතු ඔය'
වම ඔබට අපරිචිතව අදරය කරවි ...
ඔබ ගැන සොයවි....
වෙහෙසෙවි ...
ඔබ සමග යන වේ දිගු ගමනේ අත්පොත
ඔබටම පුදවි"

Thumbikulama





හැඳින්වීම

මානවයා තම ශිෂ්ටාචාරය ගොඩනැගීම පිළිබඳව වූ සාක්ෂි අප වෙත ඉතිරිකර තබා ඇත්තේ ගංගා නිම්න වැනි පහසුවෙන් ජලය සපයාගත හැකි වාසස්ථාන ආශ්‍රිත වීම මගින් පෙන්නුම් කරනුයේ ශිෂ්ටාචාරයක නොටිල්ල අන් කිසිවක් නොව නොසිදෙන ජල ධාරාවන් බවයි. ශ්‍රී ලංකාවේ භූ විෂමතාවය මහවැලි, කැලණි, කළු, වලවේ, වැනි ප්‍රධාන ගංගා සඳහා වූ නිම්න භූමි බිහිකළද ඒ එකඳු ගංගා නිම්නයක් හෝ ශ්‍රී ලංකික ඉතිහාසයේ වූ ස්වර්ණමය ශිෂ්ටාචාරයක් හා සමපාත නොවීම අතීතය පුදුම සහගතයි.

ප්‍රාග් ඓතිහාසික යුගයන්ට අයත් ජනාවාස පිළිබඳ සාක්ෂි මෙම ගංගා නිම්න ආශ්‍රිතව ප්‍රකට වුවද ලොවක් මවිත කළ අසහාය ශිෂ්ටාචාරයක් බිහිකිරීමට මෙම වසර පුරා ගලාගෙන ගිය දැවැන්ත ජල ධාරාවන් සමත් වූයේ නැත. ශ්‍රී ලාංකීය ඉතිහාසයේ ස්වර්ණමය යුගය අන් කවරක්වත් නොව අනුරාධපුර යුගය බව අවිවාදාත්මකය. ඒම ස්වර්ණමය ශිෂ්ටාචාරයේ ජීවනාලිය වූයේ වම් පසින් කලා ඔයත් දකුණු පසින් යාන් ඔයත් මැදිව අනුරාධපුරයේ හදවත විනිවිද ගිය මල්වතු ඔය හෙවත් කදම්බ නදියයි.

මල්වතු ඔය ද්‍රෝණිය දිගම්පතනින් ආරම්භ වී මන්නාරම අරිප්පු දක්වා වූ පුළුල් වපසරියකට හිමිකම් කියයි. ආරම්භක භූ විෂමතාවය මාතලේ කඳු පන්තීන්ගේ අවසානය ස්පර්ශ කරමින් දෙවන අඩකැන්තේ සනිටුහන් වන බැවින් ද්‍රෝණියේ ආරම්භය සැලකිය යුතු ආනතියක් හෙවත් බැවුම් ස්වරූපයක් පෙන්නුම් කරයි. මෙම බැවුම් ස්වරූපය දිගම් පතන සිට හොරිවිල දක්වා දක්නට ලැබේ. අනතුරුව වියළි කලාපීය තැනිතලා භූ ලක්ෂණයන්ට අනුගත වීම දක්නට ලැබේ. මල්වතු ඔය ශ්‍රී ලාංකීය අදින ශිෂ්ටාචාරයේ නොටිල්ල වීම අහම්බයකට වඩා විද්‍යාත්මක සංසිද්දියක් බව කිව යුතුය.

ශ්‍රී ලංකාවේ පාෂාණ පද්ධතිය සැලකූ විට වැඩි ප්‍රදේශයක් ආවරණය කරනුයේ පූර්ව කේම්බ්‍රිය යුගයට අයත් ක්‍රිස්ටලයින් පාෂාණ මගිනි. අනුරාධපුර දිස්ත්‍රික්කයේ ප්‍රධාන වශයෙන් සමන්විත වනුයේද එකී ක්‍රිස්ටලයින් පාෂාණයේ ප්‍රධාන කාණ්ඩ වන බටහිර විජයානු සංකීර්ණය (Western Vijayan Complex) හා උස් බිම් සංකීර්ණ යටය (Highland complex). මතුපිට පාංශු ස්තරය නිර්මාණය වී ඇත්තේ ප්‍රදාන වශයෙන්ම රතු දුබුරු සහ අවහිසුම්ක දියළු පස (Reddish Brown Earths and Low Humic Gley soils) යන පාංශු බණ්ඩ වලිනි. එම තත්වය මත වර්ෂා ජලය පස තුළට උරා ගැනීමට වඩා ඉහල සම්භාවයකින් මතුපිට ගලා යාම (Runoff) සඳහා ඉඩකඩ සැලසීය. මෙම පාෂාණමය ලක්ෂණත් ඊට අමතරව තැනිතලා මතින් දිවෙන ගංගා ද්‍රෝණිය , සාපේක්ෂව වඩා ආකර්ෂණීය වූ බැවින් ශ්‍රී ලාංකීය ආදි මානවයා ශිෂ්ටාචාර බිහි කිරීමෙහිලා දැදුරු ඔය, කලා ඔය, මල්වතු ඔය හා යාන් ඔය යන ප්‍රධාන ගංගා මූලිකකර ගත් බවට සාක්ෂි ඇත. (ධර්මසේන, 2010). ඒ අනුව ප්‍රමාණවත් නොවන වර්ෂාපතනය අධික උත්ස්වේදනය හා වාෂ්පීකරණය නිසා ඇතිවන නියඟය යන සාධක හමුවේ වුව ආදි මානවයා මෙම ගංගා ද්‍රෝණිය , අසබඩ ජනාවාස කිරීමට ගත් උත්සාහයේ ප්‍රතිඵලයක් ලෙස ජලය එක්රැස් කිරීම සඳහා වූ නිර්මාණාත්මක ප්‍රවේශයක් වූ වැව ද එම වැවේ ජලය ස්වභාවික ජලාපවාහන පද්ධතීන් හරහා ඉතාමත්ම තිරසාර ලෙස භාවිතා කිරීමට ගත් උත්සාහයේ ප්‍රතිඵලයක් ලෙස එල්ලංගා පද්ධතීන් ද බිහිවිය. ඒ අනුව එල්ලංගා පද්ධතියක් යනු ඉතාම විද්‍යානුකූල ලෙස ස්වභාවික ජලවහනය අධ්‍යයනය කර, තමාගේ ප්‍රතිපාදන සේවා, නියාමන සේවා, සස්කෘතික සේවා සහ උපකාරක සේවා යන බහුවිද පරිසර පද්ධති සේවාවන් ඉටුකර ගැනීම පිණිස ජීවි, අජීවි සහ සමාජ සබඳතා සහිතව නිර්මාණය වූ භූ විද්‍යාත්මකව සංවෘත පරිසර පද්ධතියකි.

වැව සහ වැව එල්ලංගාවක් හෙක් විකාශනය වීම

වැව යනු ශ්‍රී ලාංකීය ශිෂ්ටාචාරයේ ලෝක උරුමය බවට තර්කයක් නැත. එහි සුවිශේෂත්වය තීවර කරනුයේ හුදෙකලා වැව් සංකල්පය වෙනුවට පොකුරු වැව් සංකල්පය හෙවත් එල්ලංගා පද්ධති නිර්මාණය කිරීමට ශ්‍රී ලාංකීය ආදි මානවයා සතු වූ විශිෂ්ට භූ විද්‍යාත්මක, ජල විද්‍යාත්මක හා ඉංජිනේරුමය හැකියාවයි. ගංගා ද්‍රෝණියක් තවත් ගංගා ද්‍රෝණිය කින් වෙන් කිරීම මහා හින්තකින් හෙවත් කඳු වැටියකින් සිදු කරනු ලබයි. මෙය සමහර විට කඳු පන්තියක් ලෙස වුව අපට දැක්විය හැක. වියළි කලාපය තුළ මෙම මහා හීනි තැනින් තැන දක්නට ලැබෙන ශේෂ කඳු පන්තීන් හා ඒ අතර පවතින අඛණ්ඩ පස් හෝ බොරළු වැටි වලින් යුක්තය. ප්‍රධාන හීනිවල බැවුමේ උප මහා හීනි පවතින අතර එම ප්‍රධාන හීනිවල මධ්‍ය අක්ෂයට

කේන්ද්‍රගතව ඵල්ලංගා හින්න පිහිටා ඇත. මෙම ඵල්ලංගා හින්න මගින් වටවන නිමින භූමියේ පටු ස්ථාන මැනවින් තෝරාගෙන ස්වභාවික කඳු ගැට දෙකක් යා කරමින් ඉදිකර ඇති බැම්මක් මගින් වැව් නිර්මාණය සිදු වී ඇත. ඵල්ලංගා පද්ධතියක් නිර්මාණය වන ඵල්ලංගා හින්න පුළුල් නිමිනයක් වන විට එහි මධ්‍ය අක්ෂය දිගේ පිහිටන වැව් වලට අමතරව දෙපස ඇලපත් වැව් දක්නට ලැබේ (මහකනුමුල්ල, කපිරික්ගම, බෙල්ලන්කඩවල ඵල්ලංගා). නමුත් ඵල්ලංගා හින්න ඵල්ලංගාව නිර්මාණය වන නිමිනය පටු වන විට සියලු වැවු හෝ සාතිශය බහුතර වැව් මධ්‍ය අක්ෂය මත පිහිටීම සිදු විය (තුම්බිකුලම, තිරප්පනේ ඵල්ලංගා). මේ අනුව ඵල්ලංගා පද්ධතිය අතු බෙදුනු ඵල්ලංගා වක් හෝ රේඛීය ඵල්ලංගාව ලෙස වර්ග කළ හැක. මෙම වර්ග කිරීම සඳහා ඵල්ලන්ගාවේ දිග සහ සමස්ත ඵල්ලංගාවේ වර්ගපලය අතර අනුපාතය උපකාරී කර ගත හැක.

බොහෝ විට ඵල්ලංගා පද්ධති කිහිපයක එකතුව උප ගංගා දෝණියකක් සඳහා මූලාශ්‍ර වන අතර එම උප දෝණිය , ප්‍රධාන දෝණියට මූලාශ්‍ර වීම සිදුවේ. මෙසේ ස්වභාවික ජලවහන පද්ධතිය මානවයා තම ජීවනාලිය හඳවන බදු කෘෂිකර්මය සඳහා අතිශය සුහුරු හා තිරසර ලෙස භාවිතා කිරීමක්, ශ්‍රීලාංකීය වියළි කලාපීය ඵල්ලංගා පද්ධතීන් හා සංසන්දනය කිරීමක් කල විට ලොව වෙනත් තැනක දක්නට නැති තරම්ය. ඵල්ලංගා පද්ධතියක් සෑම විටම ජලවහන පද්ධතිය හා බැඳී පැවතීමත් එම පද්ධති බිහිකිරීම මගින් පරිසරයේ සිදුවන වෙනස්කම් වල බලපෑම තුලනය කිරීමටත් සුවිශේෂ වූ නිර්මාණාත්මක ප්‍රවීණිතයන්ගෙන් යුක්තවීම දක්නට ලැබේ.

නිමිනයේ ඉහළ භූමියේ පවතින බැව් බොහෝ විට ආසන්න කැලෑ රොදක් සහිත හින්නේ එකතු වන දිය සිරාවෙන් ද වර්ෂා ජලයෙන් පෝෂණය වන ආගර ජලයෙන්ද මූලාශ්‍රය ලබන බැවින් බොහෝවිට කෘෂිකාර්මික යෙදවුම් වලින් ද පාංශු බාදනය මගින් එක්වන රොන්මඩ වලින්ද ආරක්ෂිතය. වෙනත් වැවකින් පිටවන වාන් ජලය හෝ සොරොව්වෙන් පිටවන වෙල්පහු ජලය හෝ මෙම වැව්වල නොලැබෙන බැවින් මෙම වැව් නිමිනයේ පළමු පෙළ වැව් ලෙස සලකනු ලබයි. මෙම වැව් වලින් පිටවන වාන් වතුර හෝ වෙල් පහු වතුර ලෙස පිටවන ජලය ඉන්පසු කෘෂිකාර්මික භූමි හරහා හින්නේ දෙවන පෙළ වෙත ගමන් කරයි. මේ ආකාරයට ඵල්ලංගා හීනි දෙක අතර නිමිනයේ පළමු දෙවන තෙවන හා සිව්වන ආදී ලෙස පෙළවල් කිහිපයක් පැවතිය හැක. මෙසේ නිමිනයේ මධ්‍ය අක්ෂය ඔස්සේ සොයා ගලා එන ජලය බොහෝවිට මධ්‍ය අක්ෂය හරස් කර සාදන තරමක් විශාල වැව්වලට එකතුවීම දක්නට ලැබේ. බොහෝ විට එම මධ්‍ය අක්ෂයේ පවතින මහ වැවේ නමින් ඵල්ලංගාව නම් වීමද සිදුවේ උදාහරණ ලෙස බෙල්ලන්කඩවල ඵල්ලංගාව, මහකනුමුල්ල ඵල්ලංගාව හා තුම්බිකුලම ඵල්ලංගාව හැඳින්විය හැකි

ඵල්ලංගාවක් සෑමවිටම ඵල්ලංගා වේ සීමාවනිර්ණය කරනු ලබන ඵල්ලංගා හීනි දෙක තුළ පවතින අතර එම උස් බිම් ආක්‍රමණය කිරීම සිදු නොකරයි. මේ අනුව ඵල්ලංගා වක් යනු එක්තරා ආකාරයක සංවෘත පද්ධතියක් ලෙස හැඳින්විය හැකි අතර එකී ඵල්ලංගාවක අවසානය ලෙස නිමිනයේ පහළින්ම පිහිටන මහ වැවක් හෝ උප දෝණියේ මධ්‍යක්ෂීය ඇලක් හෝ ඔයක් දැක්විය හැක. මහා හින්න උප මහා හින්න හා ඵල්ලංගා හින්න යන හීනි වලට අමතරව ඵල්ලංගා හින්න තුළ වැව් නිර්මාණය කිරීම සඳහා වූ වැව් හින්න හෙවත් වැව් බැම්ම නිර්මාණයට භාවිතා කළ මදක් උස් කඳු වැටියකින් සීමා නිර්ණය වන උස් බිම් තීරුවක් ද හඳුනාගත හැක.

ඵල්ලංගා පද්ධති එක්වූ වැව් එකිනෙක අතර අන්තර් සබඳතා පවත්වනු ලබන්නේ ප්‍රධාන වශයෙන් ම වාන් ඇල ඔස්සේ ගලා යන වාන් ජලධාරා වත් සොරොව්ව හරහා නිදහස් වන වෙල්පහු ජල ධාරාවක් වැව් අතර පිහිටි පොළොව අභ්‍යන්තරයෙන් දිවෙන භූගත ජල ධාරාවන්ගේ එකතුවක් ලෙසය.

ඵල්ලංගාවක එක් වැවකින් අනිත් වැව් දක්වා වූ පරිසර පද්ධතිය අතිශය සිත්කලු ජෛව හා පාංශු විවිධත්වයකින් යුක්තය. වැවක ජලය රැඳී පවතින විට එම වැව තුළ ජලයේ ඇති විවිධ ලවණ වර්ග තැන්පත් වීම මගින් කිවුල ඇතිකරනු ලබයි. මෙම ලවණ අතර නයිට්‍රේට්, නයිට්‍රයිට්, පොස්පේට්, සල්ෆේට් වැනි ඇනායන ද සෝඩියම්, පොටෑසියම්, කැල්සියම් සහ මැග්නීසියම් වැනි කැටායන දක්නට ලැබේ. මෙම කිවුල වැව් බැම්මේ සිට කාන්දු වීම මගින් (seepage) වැව් බැම්මේ සිට දිය සිරාවක් ලෙස පිට කිරීම සිදු කරනු ලබයි. මෙම ලවන සහිත ජලය වැව් බැම්මට පසුව පිහිටන කට්ටකාඩුව (Intercept) හෙවත් මිටි ශාක සහිත තුනී පරිසර පද්ධතියට එකතු වීමට සලස්වා ඇත. සාමාන්‍යයෙන් වැව් බැම්මේ උස මෙන් පහළොස් ගුණයක් තරම් වූ කට්ටකාඩුව පැවතිය යුතු බවට නියමයක් පනවා ඇත්තේ එකී ලවණ කට්ටකාඩුව තුළදී රඳවා තබාගෙන පෙරාගත් ජලය කුඹුරු වෙත නිදහස් කිරීම අරමුණු කරගෙනය. තව ද කට්ටකාඩුවේ ඇති යතුරු වල මගින් ඇතිකරන්නා වූ ජල තෙරපුම වැව් බැම්මේ සිට සිදුවෙන කාන්දු වීම

අවම කිරීමට උපකාරී වේ. කට්ටකාඩුවක බොහෝවිට ස්වභාවික වර්ධනය වූයේ මෙම කිවුලට ඔරොත්තු දෙන නබඩ, කුඹුක්, පටබෙලි, පන්වර්ග සහ හබරල වැනි ශාක වර්ගයන්ය.

මෙසේ කට්ටකාඩුවෙන් පසු ජලය කිවුල් අල දිගේ ගල යාම සිදී වන අතර එහිදී නැවත කෘෂිකාර්මික යෙදවුම් මගින් මෙම ජලය දූෂණය වීම සිදුවේ. වර්තමානය වන විට භාවිතා වන රසායනික පොහොර හා පලිබෝධනාශක මෙම දූෂක ලෙස එක් වුවද අතීතයේ පටන් ගව පට්ටි මගින් එකතු වූ ගව මුත්‍රා හා ගොම මගින් ද ජලයට පෝෂණ ද්‍රව්‍ය එකතු වීම සිදුවී ඇත. මේ නිසා එම වෙල්පහු ජලය ඊලඟ වැවට ළඟා වීමට පෙර පිරිපහදු කිරීම අත්‍යාවශ්‍ය විය. එම නිසා මෙම කිවුල් ඇළ, නිම්නයේ පහළ පිහිටි වැවට සාප්‍රචම එකතු වීම වෙනුවට පෙරනයක් හෙවත් ප්‍රේරක ප්‍රදේශයක් හරහා ගොස් පහළ වැවට නැවත එකතු වීමට ඉඩ සලසා තිබුණි. මෙම පෙරීම ගොඩවල (upstream water hole) ආශ්‍රිත තෘණ හා ජලජ ශාක සහිත ජලජ පරිසරයෙන් ද ඉදි පිටිය (“Idi Pitiya”) නම් වූ විශේෂ පරිසර පද්ධතියක් තුළ තුළින්ද ගස් ගොම්මන (Tree Belt) තුළදී ද අනුක්‍රමණික සිදුවිය. වාෂ්පීකරණය අවම කිරීමට සුලබත් බාධකයක් ලෙස නිර්මාණය වන ගස් ගොම්මන තුළ වූ විශාල ශාකවල මුල් පද්ධතීන් හා ඒ හා බැඳුණු දිලීර ජාලය මෙම පෝෂණ ද්‍රව්‍ය අවශෝෂණය (Absorption) කිරීම සිදුකරයි. එසේම ජලජ ශාක ද සිය මුල් මගින් මෙම අවශෝෂණ ක්‍රියාවලිය කාර්යක්ෂමව සිදු කරනු ලබයි. තවද ජලජ ශාක වර්ග හා මෙම තෘණ වර්ග මගින් එම පෝෂක ද්‍රව්‍ය අධිශෝෂණය (Adsorption) කිරීම සිදුකරනුයේ එම ශාකවල කඳන් වලින් හා පත්‍ර වලින් පෝෂක ද්‍රව්‍ය ගලා යෑම අවහිර කර තැන්පත් (sediment deposition) කර ගැනීම මගිනි. ඒ අනුව අවශෝෂණය, අධිශෝෂණය හා නයිට්‍රිහරන (denitrification) යන ක්‍රියාවලීන් මගින් පෝෂක ද්‍රව්‍ය ඉවත් කිරීම හා තැන්පත් කිරීම ස්වභාවිකවම සිදු වීමට ඉඩ සලස්වා තිබුණි මෙසේ තැන්පත් කරනු ලබන පෝෂක තැන්පත් වීම මගින් අධික කිවුලක් සහිත ඉදිපිටි නිර්මාණය වූ අතර ඉදිගස්, නීරමුල්ලිය, පන් වර්ග වැනි කඨෝර ශාක සඳහා මෙම වැව් ප්‍රදේශ තෝතැනි විය.

මෙසේ ගලා එන ජලය පිරිපහදු කිරීමෙන් පසු වැවට ලැබෙන්නට සැලැස්වීමට අමතරව වර්ෂා කාලවලදී වැව් දෙපසින් වූ රොන් මඩ හා බාදින අප ද්‍රව්‍ය වැවට ගලා ඒම වැළැක්වීමට ඉස්වැටිය (Upstream soil ridge) නිර්මාණය කර තිබිණි. මේ ආකාරයට ඉතා විශිෂ්ට ලෙස නිර්මාණය කළ ජෛව අජෛව පරිසර පද්ධතියක් ලෙස වැව හා එල්ලංගා පද්ධතිය සැලකිය හැක. එහි විශේෂත්වය කෙතරම් ද යත් දොළොස් වන සියවසෙන් පසු දහනව වන සියවසේ මුල් භාගය තෙක් සියවස් හතක් යනතුරු කිසිදු මානව ක්‍රියාකාරකමකට ලක් නොවී, නඩත්තුවකින් තොරව පවා වැව් පද්ධතිය නොනැසී පැවතීම සැලකිය හැක.

දහනව වන සියවසේ මුල් කාලය තුළ නැවත ජනාවාස වන වැව් ආශ්‍රිත ශිෂ්ටාචාරය, තම මුතුන්මිත්තන්ගෙන් පැවත ආ දැනුමේ ශේෂයන්ගෙන් නව ආරම්භයක් ලබාගෙන ඇති බව පැහැදිලිය. අද භාවිත වන බොහෝ වැව් වල නම් ඒම වැව් වල අතීත නාමයන්ට වඩා වෙනස් බව පෙනී යයි. එසේම වැව ආශ්‍රිත අද පවතින මානව විසිරුම් ද අතීත විසිරුම් වලට වඩා වෙනස් බව කිව යුතුය.

බොහෝ වැව් මේ වනවිට ධාරිතාවය අතින් ඉහල දමා ඇත්තේ මීට පෙර පවති කෘෂි ඉඩම් පරිහරණ රටාවට වඩා වෙනස් පරිහරණ රටාවකට ගොවීන් හැඩගැසී ඇති බැවිනි. විශේෂයෙන්ම පැරණි කුඹුරු වලට අමතරව ඉංග්‍රීසි පාලන කාලය තුළ සිත්තක්කර ඔප්පු මගින් ලබා දුන් “අක්කර” කුඹුරු සඳහා ජලය සැපයීම වෙනුවෙන් බොහෝ වැව් වල බැම්ම දික් කිරීමත්, වාන එසවීමත්, වාන් ඇළ ස්වභාවික නිම්න භූමියේ බැස්මෙන් ඉවතට රැගෙන යාමත් දක්නට ලැබේ. මෙම ජල මට්ටම එසවීම නිසා වැව් තාවුල්ලේ පිහිටි පෙරනය, ඉදි පිටිය, ගස් ගොම්මන වැනි පද්ධතීන්ට හානි වන අතර බොහෝවිට පහළ වැවක ආරම්භය ඉහල වැවේ වෙල් දක්වා වුව ගමන් කරන අවස්තා දක්නට ලැබේ.

බොහෝ වැව් වල කට්ටකාඩුව විනාශ කර වැව් බැම්මේ පතුල (Toe of the embarkment) දක්වාම කුඹුරු කිරීම ඉතා විනාශකාරී බව කිව යුතුය. මෙසේ වග කරන කුඹුරු බොහෝ විට අධික ලෙස පන් වර්ග වල ආක්‍රමණයට ලක් වන අතර අධික පිරිවැයක් දරා එම වල් මර්ධනය කල යුතුය. මේ ආකාරයට අතීත ශ්‍රී විභූතිය සඳහා ජීවය දුන් එල්ලංගා පද්ධතීන්, වර්තමාන ගොවීන් (බොහෝවිට අර්ධ කාලීන ගොවීන්) විසින් තෘෂ්ණාව සහ නොදැනුවත්කම නිසා විනාශ කරන අවස්ථා දක්නට ලැබේ. මේ සබඳිව අප විසින් ඉදිරි ප්‍රකාශන මගින් තොරතුරු ඉදිරිපත් කිරීමට බලාපොරොත්තු වෙමු.

තුම්බිකුලම ඵල්ලංගාව

තුම්බිකුලම ඵල්ලංගාව යනු මල්වතු ඔය ද්‍රෝණියේ ආරම්භක නිමිත භූමිය සනිටුහන් කරමින් ඇරඹෙන පලවෙනි ඵල්ලංගා පද්ධති තුන අතරින් පළමු ස්ථලය හා බෙල්ලංකඩවල යන පුළුල් ඵල්ලංගා පද්ධති දෙකට මැදි වූ පටු නිමිත භූමිය පිහිටි රේඛීය ඵල්ලංගාවකි. මෙම ඵල්ලංගා පද්ධතියේ තුම්බිකුලම ඵල්ලංගාව ආරම්භ වන්නේ දිගම්පතන උස් බිම් ආශ්‍රිතව පැතිර පත්තා වූ ස්වාභාවික වනාන්තර ආශ්‍රිතවය. එම ස්වාභාවික වනාන්තර අනුරාධපුර දිස්ත්‍රික්කයටත් මාතලේ දිස්ත්‍රික්කයටත් මායිම්ව පිහිටි දිස්ත්‍රික්ක දෙකේම ලක්ෂණ පෙන්නුම් කරන සදාහරිත ගණයේ වනාන්තර වේ. මාතලේ කඳු බෑවුමේ ඇති තද බෑවුම් ස්වාභාවයත්, මාතලේ පාංශු විවිධත්වයත් මෙම ඵල්ලංගා පද්ධතිය තුළ දක්නට ලැබේ. තුම්බිකුලම ඵල්ලංගාව සාපේක්ෂව කුඩා ඵල්ලංගාවක් වන අතර, එහි සමස්ත වැව් ප්‍රමාණය පහකි.

එම ඵල්ලංගාවේ ආරම්භක වැව ලෙස අප හඳුනා ගන්නේ දිගම්පතන ආසන්නයේම පිහිටන බුලන වැවයි. බුලන වැවට පසුව අපට එම මධ්‍ය අක්ෂීය රේඛාව ඔස්සේ අපට හමු වන්නේ මෙම තුම්බිකුලම ඵල්ලංගා පද්ධතියට එකී නම සනිටුහන් කරන තුම්බිකුලම වැවයි. තුම්බිකුලම වැව මෙම ඵල්ලංගාවෙහි ඇති විශාලම වැව වන අතර, එය කාලයක් පුරාවට බිඳී ගිය වැවක් ලෙස පැවත ඇත. මීට වසරකට ආසන්න කාලයකදී තුම්බිකුලම වැව ප්‍රතිසංස්කරණය කර ඇති අතර, මේ වන විට වැවේ ජලය රඳන ප්‍රදේශය එසේ නම් වැවේ ජල ප්‍රදේශය පවා වැව බිඳීගිය කාලය තුළ වනාන්තරයක් ලෙස දියුණු වී ඇති බවට සාධක දක්නට ලැබේ. නමුත් පිලිසකර කිරීමෙන් පසුව මේ වන විට වැව සම්පූර්ණ ක්‍රියාකාරී බවට එලැබ පවතී. තුම්බිකුලම වැවෙන් පසු ජලය ගල්කඩවල වැවට වෙල්පහු වතුර සහ වාන යන දෙයාකාරයෙන්ම සැපයෙන අතර, ගල්කඩවල වැව යනු මෙම ඵල්ලංගාවේ මධ්‍ය අක්ෂීය ඇති අවසාන විශාල වැවයි. මෙම ඵල්ලංගාවේ මධ්‍ය අක්ෂීය ඇළට දකුණින් කුඩා ඇළපත් වැව් දෙකක් ඇති අතර එම වැව් දෙක කායන් වැව සහ පට්ටිය වැව ලෙස හඳුන්වයි.

මේ ප්‍රධාන මධ්‍ය අක්ෂීය ඔස්සේ එන ඇළ මෙම තුම්බිකුලම ඵල්ලංගාවට වම් පසින් දිවෙන බෙල්ලංකඩවල ඵල්ලංගාවේ ප්‍රධාන ඇළ වන බෙල්ලං ඇළට ගල්කඩවල වැවට පසු ගල්කඩවල වැවේ මධ්‍ය අක්ෂීය ඇළ සම්බන්ධ වීම සිදු වේ. ඉන් පසු එම ජලය බෙල්ලං ඇළට සම්බන්ධ වී හොර්විල මහ වැව දක්වා ගමන් කිරීම සිදු වේ. ඒ ආකාරයට දිගම්පතන උස්බිම් ආශ්‍රිතව පවතින ස්වාභාවික වනාන්තර වලින් එන අගාර වතුරද, වැසි ජලයද එකතු වී, සැදෙන්නා වූ ජල සංචිතය බෙල්ලං ඇළ ඔස්සේ ජල සංචිත තුම්බිකුලම ඵල්ලංගාවේ මධ්‍ය අක්ෂීය ඇළ හරහා ගමන් කර අවසානයේ බෙල්ලං ඇළ හා සම්බන්ධ වී හොර්විල වැව දක්වා ගමන් කිරීම සිදු වේ. මෙහි ඵල්ලංගාවේ පළමු වැව වන බුලන වැව ගත් විට එය සාපේක්ෂව කුඩා වැවක් වන අතර, මේ වන විට බුලන වැව ආශ්‍රිතව කුඹුරු අක්කර දාහතරක් පමණ වගා කටයුතු සිදු වන බව නිරීක්ෂණය විය. නමුත් බුලන වැව ආශ්‍රිතව මානව ක්‍රියාකාරකම් වැවේ පරිසරය පද්ධතියට තර්ජනාත්මක ලෙස ඉස්මතු වන්නේ එම වැව ආශ්‍රිතව ස්වාභාවිකව පැවතුනා වූ කට්ටකාඩුව මේ වන විට දක්නට නොලැබෙන බැවිණි. එකී පුරාතණ කට්ටකාඩුව පැවති සීමාවේ මහ ගස් තවම පවතින්නා අතර, එකී ගස් මේ වන විට පවතින්නේ කුඹුරු යායක් මැද වීම කට්ටකාඩුව මානවයා විසින් ආක්‍රමණය කර ඇති බවට නිදසුනකි. බුලන වැවේ වාන වතුර බුලනවැවේ වැව් බැම්ම ආසන්නයෙන්ම ගලා යන අතර, එය වැව් බැම්මටද යම් ආකාරයක තර්ජනයක් මතු කරන බව නිරීක්ෂණය විය. බුලන වැවේ වාන ජලය සහ වෙල් පහු ජලය මෙම කුඹුරු යාය පසු කරමින් ඉන්පසු රක්ෂිතයට ඇතුළත් වන අතර, රක්ෂිතය තුළදී එය තුම්බිකුලම මහ වැවට එකතු වීම සිදුවේ. තුම්බිකුලම වැව බොහෝ කාලයක් අකර්මණය වී පැවතීම නිසාත්, පසුකාලීනව එම ප්‍රදේශය රක්ෂිත වනයක් ලෙස ගැසට් කිරීම නිසාත්, තුම්බිකුලම වැව ආශ්‍රිතව මානව ක්‍රියාකාරකම් ඉතා අල්ප බව කිව යුතුය. එම නිසා තුම්බිකුලම වැව ආශ්‍රිතව සාම්ප්‍රදායික වැවක පවතින ලක්ෂණ ආරක්ෂා වී ඇති බව නිරීක්ෂණය විය.

තුම්බකුලම වැව ගත් විට කිමී1.5 යුත් වැව් බැම්මක් සහිතව ඉතා මැනවින් ආරක්ෂා වූ කට්ටකාඩුවක්ද, රක්ෂිත ප්‍රදේශයක් පසුකර එන බැවින් ඉතා සුපෝෂිත ගස් ගොම්මනක් සහිත වැවකි. මෙම වැවේ වාන් ජලය නැවතත් එහි පුරාතණ වානත්,එසේම මෑතකදී ඉදිකල වානත් යන දෙකම එකට එකතු වී රක්ෂිතය හරහා ගල්කඩවල වැව හරහා ගමන් කිරීම සිදු වේ. එම වැවේ වෙල්පහු වතුර හෙවත් සොරොව් ජලය වැවේ පිහිටා ඇති සොරොව් දෙකක් මගින් රක්ෂිතය තුලට මුදා හැරීම සිදු කරයි. මෙයින් ප්‍රධාන වශයෙන් බලාපොරොත්තු වන්නේ එම ජලය පහල ඇති ගල්කඩවල වැවට ලබා දී, ගල්කඩවල වැව ආශ්‍රිතව කරන්නා වූ කෘෂිකාර්මික කටයුතු වලට සහාය ලබා දීමයි. මේ වන විට තුම්බකුලම වැව මගින් කිසිදු කෘෂිකාර්මික කටයුත්තක් සිදු නොකරන අතර එය ජල සංචිතයක් පමණක් ක්‍රියා කිරීම සිදු වේ. තුම්බකුලම වැව ආශ්‍රිතව ප්‍රදේශය ගත් විට කට්ටකාඩු ප්‍රදේශ මැනවින් ආරක්ෂා වී ඇති අතර,එම කට්ටකාඩුව තුල වියළි කට්ටකාඩුව, වියළි සහ තෙත් කට්ටකාඩුව හා තෙත් කට්ටකාඩුව මෙන්ම වසර පුරා මඩ සහිත කට්ටකාඩුව ලෙසද කොටස් හතරක් හඳුනා ගත හැකිය. මේ වන විට වැවේ ප්‍රතිසංස්කරණ කටයුතු සිදු කරන නිසා බොහෝ විට මෙම කට්ටකාඩුව එම අලුතින් එකතු කරන ලද පස් මුදා හැරීම මගින් කට්ටකාඩුවේ ඉහල ස්ථරය අලුතින් එක්කල පස් සහිත වීම නිරීක්ෂණය විය. මෙහිදී වැව් බැම්මේ මධ්‍යයට ආසන්නයෙන් මීට පෙර වැව බිදී ගිය ඇළ පහරක දක්නට ලැබෙන අතර එම ඇළ පහර හරහා තාමත් සිපේජ් ලෙස කාන්දු වන ජලයත් දැකගත හැකි

තුම්බකුලම වැවේ වාන ඔස්සේ රක්ෂිත මැදට ගමන් කිරීම සඳහා මීට පෙර ගම්මුත් විසින් භාවිතා කල මාර්ගයක් ඇති අතර එම මාර්ගය ඔස්සේ ගල්කඩවල වැවට ගමන් කල හැක. එය අතිශය දුෂ්කර ගමනක් වන්නේ එය සම්පූර්ණයෙන් රක්ෂිතයක් මැදින් පැවතීමත්, විශාල ලෙස වන අලින් ගැවසෙන ප්‍රදේශයක් වීමත් නිසාය. නමුත් එම වාන් ඇළ ඔස්සේ අතිශය ඉහල ජෛව විවිධත්වයක් දක්නට ඇති අතර එය වියළි කලාපීය පරිසර පද්ධතියක්ගෙන්, තෙත් කලාපීය පරිසර පද්ධතියක්ගෙන් අතර මැදි ස්වරූපයක් පෙන්වුම් කරයි. මෙම ප්‍රදේශය තුල වියළි කලාපයේත්, තෙත් කලාපයේත් යන කලාප දෙකේම දක්නට ලැබෙන ශාක ඉතා විශාල වශයෙන් දක්නට ලැබෙන අතර, ඉතා විරල වශයෙන් දක්නට ලැබෙන කුරුලු විශේෂ ද දක්නට ලැබේ. ගල්කඩවල වැව ගත් විට සාපේක්ෂව වැඩිම කුඹුරු ප්‍රමාණයක් අස්වද්දනු ලබන්නේ ගල්කඩවල වැවෙනී. ගල්කඩවල වැවේ වාන එක් කෙලවරකට වන්නට ඇති ගල් සහිත භූමියක් ආසන්නයෙන් දක්නට ඇති අතර, ගල්කඩවල වැවේද කට්ටකාඩු ප්‍රදේශය ඉතා හොදින් ආරක්ෂා වී ඇති බවට දක්නට ලැබේ. මෑත කාලයේදී ප්‍රතිසංස්කරණයක් කර නොතිබෙන බැවින්,මෙම කට්ටකාඩුව තුල ඉතා උසස් පාංශු සාම්පල් ලබා ගැනීමට හැකි විය. ගල්කඩවල වැවද තුම්බකුලම වැව මෙන්ම ගැඹුරු ආනතියක් සහිතව එකී ආනතිය වැව් බැම්මෙන් පසුව එන කට්ටකාඩුව තුල දක්නට ලැබේ.

මෙවැනිම ඉතා ගැඹුරු ආනතියක් සහිතව වායව උල්පත වැව දක්නට ලැබුණු අතර, එතරම්ම නොවුවත් තුම්බකුලම සහ ගල්කඩවල යන වැව්ද, මාතලේ භූ විෂමතාව යේ ලක්ෂණද පෙන්වමින් ගැඹුරු කට්ටකාඩු පෙන්වුම් කර ඇත. කායන් වැව සහ පට්ටිය වැව ඇළපත් වැව් දෙක ගත් විට ඒ දෙකම මධ්‍ය අක්ෂීය රේඛාවට දකුණින් ඇළපත් වැව් ලෙස පිහිටන අතර, කායන් වැව අක්කර තුනක පමණ කුඩා වැවක් වේ. පට්ටිය වැව සාපේක්ෂව විශාල වැවක් වන අතර, මේ වැව් දෙකෙන්ම පිට වන්නා වූ වෙල් පහු සහ වාන් වතුර ඍජුවම එකතු වීම සිදු වේ. මෙම එල්ලංගාවේ මධ්‍ය අක්ෂීය වැව හා මුසු නොවන අතර, ඍජුවම බෙල්ලං ඇළට එකතු වී ඒ හරහා හොර්විල වැවට එකතු වීම සිදු වේ.මෙම වැව් අතර බුලන වැවේ තුම්බකුලම වැවේත් ජලජ ශාක සුපෝෂණයක් දක්නට එතරම් නොවන අතර, ඉතා සුලු මට්ටමින් ගල්කඩවල වැවේ සුපෝෂිත ශාක දක්නට ඇත. නමුත් කායන් වැව සහ පට්ටිය වැව නිතර කෘෂිකාර්මික කටයුතු සඳහා භාවිත වන බැවින්ද එකී වැව් සඳහා ලැබෙන්නා වූ ජල පෝෂක හෙවත් අගාර ජලය කිනම් ආකාරයකින් හෝ කෘෂිකාර්මික යෙදවුම් සමග මුසු වීමක් සිදු වන බැවින් එම වැව් තුල යම්කිසි සාපේක්ෂව වැඩි ජලජ ශාක වැඩි ප්‍රමාණයක් දක්නට ලැබේ. සමස්තයක් ලෙස තුම්බකුලම පටු එල්ලංගාක් වුවත් මෙම එල්ලංගව පවත්නා නිමිත භූමිය ගැඹුරු වන බැවින් මෙහි සියලුම වැව් වල එම ගැඹුරු නිමිත ලක්ෂණ ප්‍රමුඛව පෙනේ.



Bulana Tank

A small first order valley tank and the first tank in the Thumbikulama cascade. The tank is fed by Digampathana forest as its upper catchment. The tank provides irrigation to 13-14 acres of paddy lands as its command area. The water from sluice and spill reaches Thumbikulama tank along the central axis of the valley.

“Heritage of Healing”

Medicinal plant diversity in the “Thumbikulama” cascade.

The starting area of the Malwathu Oya valley or Digampathaha is a rich source of traditional medicinal practices. Many indigenous healers / traditional physicians / Ayurvedic physicians are catering their service to heal ailments and diseases as village doctors called “Weda Mahattaya”. So, the ethnobotany of the cascade exhibited lots of potential and perspectives to continue a series of scientific studies.

The essence of healing is highly dependent on the accurate sourcing of medicinal resources such as plants, livestock and minerals. More prominently, the plants are used in traditional pharmaceuticals which are derived from either ancient pharmacopeia or inherited from generation to generation through world of mouth.

The Thumbikulama cascade is a rich source of medicinal plants as our research team identified 76 plant species along the cascade. Most of them were highly used in indigenous pharmaceutical preparations. The famous healers such as “Horiwila Weda Madura” is securing the quality of their treatments due to the rich medicinal plant collection along “Palugaswewa” and “Thumbukulama” cascades. Besides them, many traditional physicians use the Thumbikulama cascade as a source for their medicinal inputs.

Within the collection of medicinal plants, some were endemic, and some were highly threatened. The research team sourced the support of professional botanists to identify the medicinal plants and their classifications. The plants were carefully identified, and specimens were collected. The collected specimens were processed as an Herbarium using standard herbarium preparation techniques.

The Herbarium will be preserved for future studies and interested parties to research and study about the medicinal plant diversity of the Thumbikulama cascade.

Attikka (අත්තික්ක)

Ficus racemosa

Family: Moraceae

Other Names : Cluster fig, Udumbara, Aththi

Morphology:

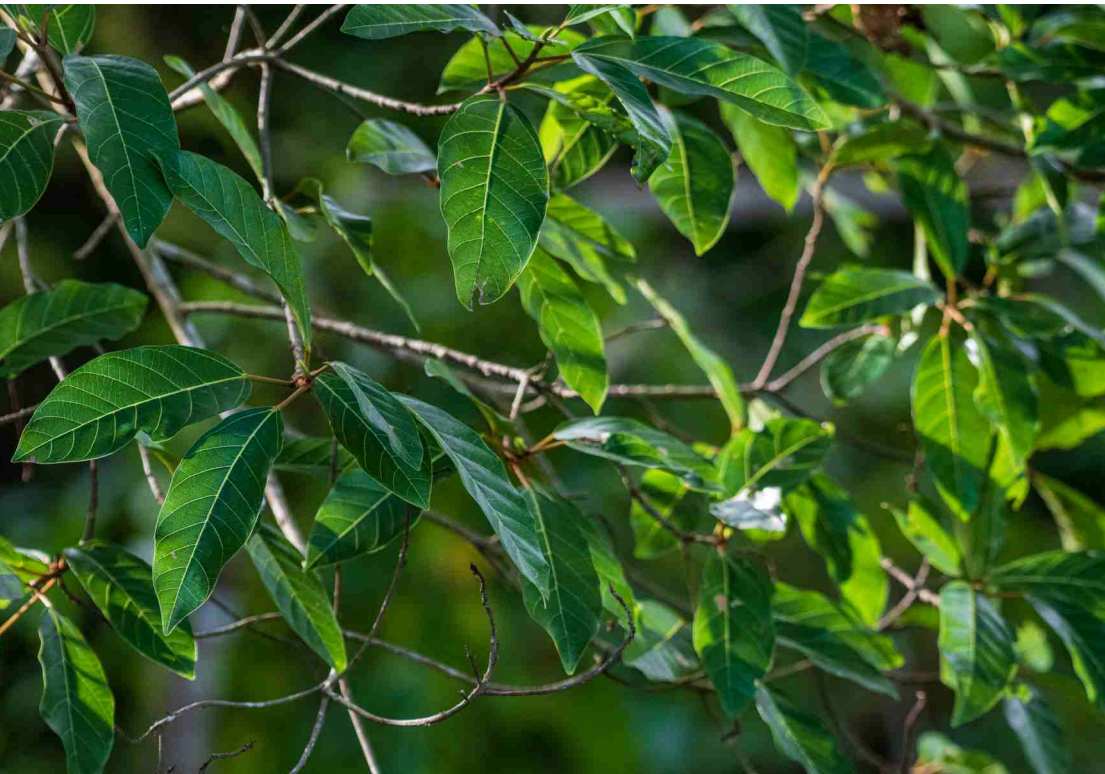
Ficus racemosa is a large, deciduous tree with a spreading crown. It has smooth, grey bark and heart-shaped leaves. The fruits are small, green figs that grow in clusters along the branches.

Chemical compounds:

Ficus racemosa contains various chemical compounds such as flavonoids, tannins, saponins, and alkaloids.

Therapeutic uses:

Ficus racemosa has been used in traditional medicine for various therapeutic purposes. It is believed to have anti-inflammatory, antioxidant, and antimicrobial properties. The tree's bark, leaves, and fruits are used to treat conditions such as diarrhea, dysentery, diabetes, and skin diseases.



Aguna (අගුණ)

Stephanotis volubilis (L.f.) S.Reuss, Liede & Meve

Family: Apocynaceae

Other Names: Cotton milk plant, Bahu parni, Ankara valli

Morphology:

Stephanotis volubilis is a woody vine with glossy, dark green leaves and waxy, white, star-shaped flowers. The flowers are highly fragrant and are often used in bridal bouquets.

Chemical compounds:

Stephanotis volubilis contains various chemical compounds, including iridoids, flavonoids, and terpenoids. These compounds contribute to the plant's fragrance and potential therapeutic properties.

Therapeutic uses:

In traditional medicine, *Stephanotis volubilis* has been used for its potential therapeutic properties, including as a remedy for skin conditions, respiratory issues, and as a natural sedative. However, it is important to note that scientific research on the plant's medicinal uses is limited.



Olinda (ଅଳିନ୍ଦ)

Abrus precatorius L.

Family: Fabaceae (Legume family)

Other Names: Wild licorice, Gunja, Kunchu

Morphology:

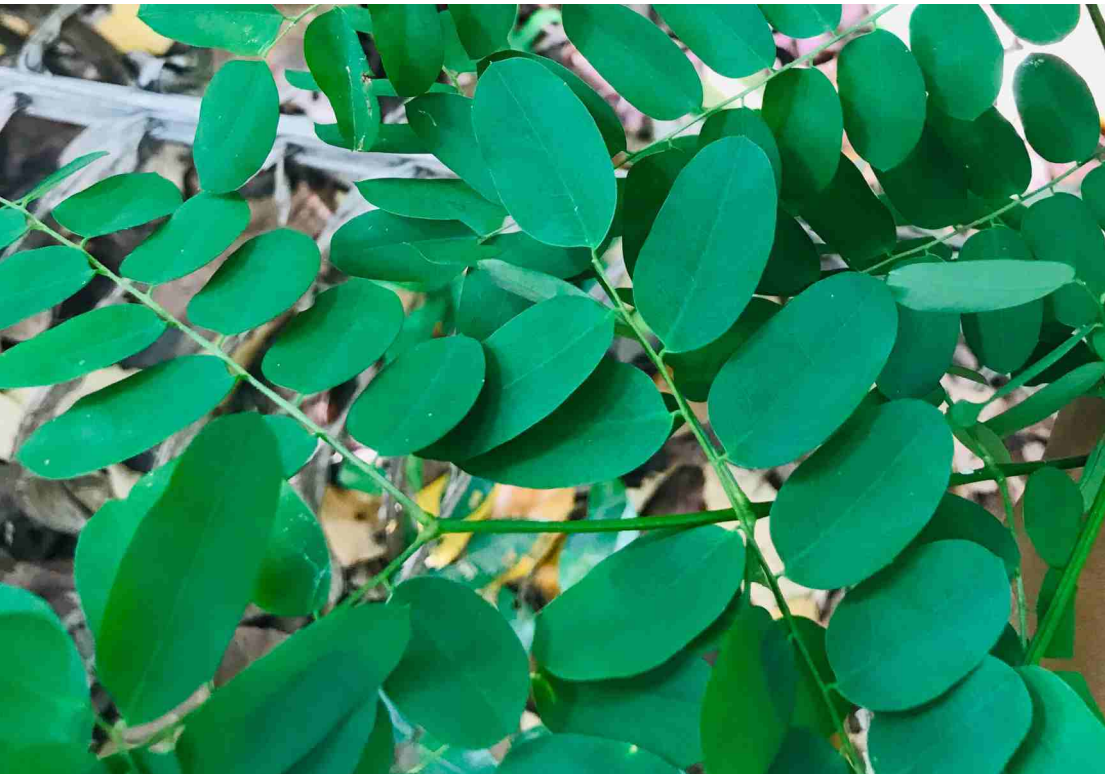
Abrus precatorius is a climbing, woody vine with compound leaves. The flowers are small and pink to purple in color, arranged in clusters. The seeds of *Abrus precatorius* are bright red with a black spot, resembling a ladybug. The plant produces pods that contain the seeds.

Chemical compounds:

Abrus precatorius contains various chemical compounds such as abrin (a toxic protein), flavonoids, alkaloids, and tannins.

Therapeutic uses:

In traditional medicine, *Abrus precatorius* is used for its medicinal properties. The seeds are known for their toxic nature due to the presence of abrin, which can be fatal if ingested. - However, in controlled doses, *Abrus precatorius* has been used in herbal remedies for conditions such as fever, cough, and skin diseases.



Aswenna (ଅସୱେନା)

Alysicarpus vaginalis (L.) DC

Family: Fabaceae (Legume family)

Other Names: Alyce clover, Shala parni, Perumpulladi Pullardi

Morphology:

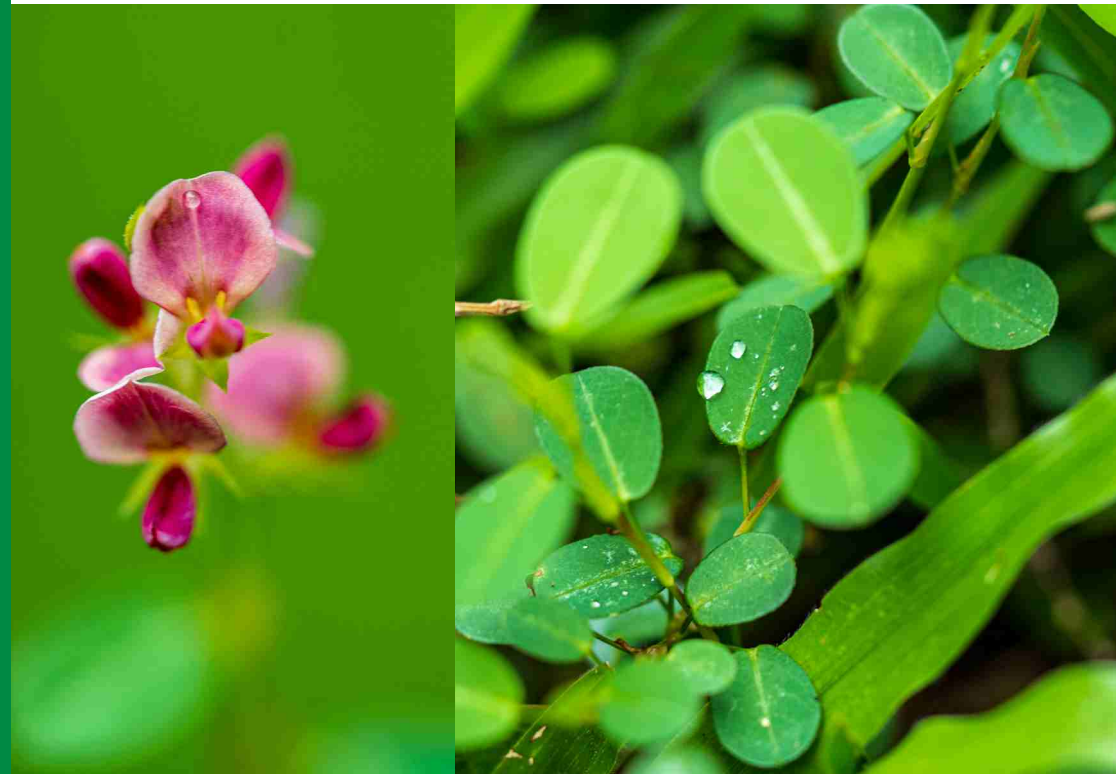
Alysicarpus vaginalis is a small, herbaceous plant with slender stems. The leaves are compound, with small leaflets arranged in pairs along the stem. The flowers are small and pinkish-purple in color, clustered in spikes at the end of the stems. The plant produces small, pod-like fruits that contain seeds.

Chemical compounds:

Alysicarpus vaginalis contains various chemical compounds such as flavonoids, alkaloids, and tannins.

Therapeutic uses:

In traditional medicine, *Alysicarpus vaginalis* is used for its anti-inflammatory and antioxidant properties. The plant is believed to have diuretic and analgesic effects. It is used in herbal remedies for conditions such as arthritis, urinary tract infections, and skin disorders.



Kithul (කීතුල්)

Caryota urens

Family: Arecaceae (Palm family)

Other Names: Toddy palm, Wine palm, fishtail palm, sritalah, kuntaypanai

Morphology:

Caryota urens is a tall palm tree with a single trunk that can grow up to 20-25 meters in height. The leaves are large, pinnate, and bipinnate, giving them a feather-like appearance. The tree produces small, round fruits that turn orange when ripe. It is known for its distinctive crown of leaves at the top of the trunk.

Chemical compounds:

Caryota urens contains various chemical compounds such as saponins, flavonoids, and phenolic compounds. The sap of the tree, known as toddy, is rich in sugars and is used to make palm wine and jaggery.

Therapeutic uses:

In traditional medicine, various parts of *Caryota urens* are used for their medicinal properties. The sap of the tree is believed to have diuretic and laxative properties. The leaves are used in herbal remedies for skin conditions and to promote wound healing. *Caryota urens* may have potential anti-inflammatory and antioxidant effects.



Karapincha (කරපිංචා)

Murraya koenigii

Family: Rutaceae (Citrus family)

Other Names: Curry leaf, Surabhini, Kariveppilai

Morphology:

Murraya koenigii is a small tree with aromatic leaves. The leaves are pinnate, with 11-21 leaflets arranged in pairs. The tree produces small, white flowers that are fragrant. It bears small, black, shiny berries.

Chemical compounds:

Murraya koenigii contains various chemical compounds such as carbazole alkaloids, flavonoids, and essential oils.

Therapeutic uses:

In traditional medicine, *Murraya koenigii* is used for its anti-inflammatory, antioxidant, and antimicrobial properties. It is commonly used in culinary dishes for its flavor and aroma. The leaves are believed to have digestive benefits and are used in herbal remedies for indigestion and diarrhea.



Polpala Polkudu pala (හොල් පලා, හොල් කුඩු පලා)

Aerva lanata

Family: Amaranthaceae

Other Names: Mountain knotgrass, Ashmahabhedah, Bhadra, Gorakshaganja, Pashanabheda, Shatakabhedi, Ciru-Pulai, Ulinai

Morphology:

Aerva lanata is a small, perennial herb with woolly stems and leaves. The leaves are lance-shaped and covered with fine hairs. The flowers are small, white to pinkish in color, and arranged in dense spikes. - The plant has a taproot system and can grow in dry, sandy soils.

Chemical compounds:

Aerva lanata contains various chemical compounds such as alkaloids, flavonoids, tannins, and saponins.

Therapeutic uses:

In traditional medicine, *Aerva lanata* is used for its diuretic, anti-inflammatory, and anti-microbial properties. It is used to treat urinary tract infections, kidney stones, and digestive issues. Gonorrhoea, Kidney disorders, Urethral discharge, Bladder and Kidney Stones, Sore throat, Eye Complaints, Snake Bites, Coughs, Boils

Heen Undupiyaliya (හීන් උඳුපියලිය)

Desmodium triflorum

Family: Fabaceae (Legume family)

Other Names: Threeflower beggarweed, Hamsapadi, Sirupullati

Morphology:

Desmodium triflorum is a small, herbaceous plant with trifoliate leaves. The flowers are small and purple, arranged in clusters of three. It has a slender stem and grows low to the ground.

Chemical compounds:

Desmodium triflorum contains various chemical compounds such as alkaloids, flavonoids, and saponins.

Therapeutic uses:

In traditional medicine, *Desmodium triflorum* is used for its diuretic and anti-inflammatory properties. It is also used to treat respiratory conditions such as coughs and asthma. *Desmodium triflorum* may have potential anti-diabetic and antioxidant effects.



Thelembu (කෙළඹු) *Sterculia foetida*

Family: Malvaceae

Other Names: Indian almond, Java olive, sterculia nut, Kaduthengu, Pinari, Putidaru, Vitkhadirah

Morphology:

Sterculia foetida is a medium-sized deciduous tree with a spreading crown. The leaves are large, palmately compound, and alternate. The flowers are small, greenish-yellow, and borne in clusters. The fruit is a woody capsule containing seeds covered in a red aril.

Chemical compounds:

Sterculia foetida contains various chemical compounds such as flavonoids, tannins, saponins, and alkaloids.

Therapeutic uses:

The seeds of *Sterculia foetida* are used in traditional medicine for their laxative and purgative properties. The bark and leaves are used for their anti-inflammatory and analgesic effects. The oil extracted from the seeds is used in skincare products for its moisturizing properties.



Kalu Habaraliya, Jabara (කලු හබරලියා,ජබර) *Diospyros ferrea*

Family: Ebenaceae

Other Names: Indian ebony, Ironwood tree, Irumbili, Karianthovarai

Morphology:

Diospyros ferrea is a medium to large-sized evergreen tree with a dense, rounded crown. The leaves are glossy, elliptic to oblong, and dark green in color. The flowers are small, bell-shaped, and yellowish-green in color. The fruit is a round, fleshy berry that turns black when ripe.

Chemical compounds:

Diospyros ferrea contains various chemical compounds such as tannins, flavonoids, and phenolic compounds.

Therapeutic uses:

The bark of *Diospyros ferrea* is used in traditional medicine for its astringent and anti-inflammatory properties. The fruit is edible and is used in some traditional cuisines. The wood of *Diospyros ferrea* is highly valued for its durability and is used in making furniture, musical instruments, and other high-quality wooden products.



Maha Apala (മഹാ അപ്പല)

Hibiscus vitifolius

Family: Malvaceae

Other Names: Heart-leaved mallow, Wild Hibiscus, Grape Leaved Mallow, Vanakarpasa, Japapushpa, Vaddattutti, Ciru-Tutti

Morphology:

Hibiscus vitifolius is a perennial herb with heart-shaped leaves and bright yellow flowers. It typically grows up to 1-2 meters in height and has a woody stem. The flowers are large and showy, with five petals and a prominent central stamen.

Chemical Compounds:

Hibiscus vitifolius contains various chemical compounds, including flavonoids, alkaloids, tannins, and saponins.

Therapeutic Uses:

Anti-inflammatory: The plant has anti-inflammatory properties and may help reduce inflammation in the body.

Antioxidant: *Hibiscus vitifolius* is rich in antioxidants, which can help protect cells from damage caused by free radicals.

Digestive Aid: It is believed to aid digestion and alleviate gastrointestinal issues.

Diuretic: The plant may have diuretic properties, promoting urine production and helping with detoxification.

Antimicrobial: *Hibiscus vitifolius* has antimicrobial properties that may help fight against certain infections



Small Horsefly's Eye

Dopatrium nudicaule

Morphology

Annual or biennial herb. Typically grows between 10-50 cm. Leaves Basal rosette of leaves; lanceolate to elliptic, often with a prominent midrib. Flowers Small, pink or red, usually 4-5 petaled. The flowers are often clustered in dense, terminal cymes. Produces a capsule containing numerous seeds.

Chemical Composition

Centaurium species are known for their bitter compounds, mainly secoiridoid glycosides. The chemical composition of *Centaurium nudicaule* likely includes: Secoiridoid Glycosides Including gentiopicrin, sweroside, and swertiamarin. Flavonoids Such as apigenin and luteolin. Xanthones Including mangiferin and isomangiferin. Other Constituents Alkaloids, triterpenes, and phenolic acids.

Traditional Use

Centaurium species have been used in traditional medicine for centuries, particularly in Europe. Common traditional uses include Digestive Aid The bitter compounds are known to stimulate appetite and aid digestion. Liver Health Used to support liver function and treat liver disorders. Antipyretic Traditionally used to reduce fever. Anti-inflammatory and Antimicrobial Applied topically for its antiseptic properties. General Tonic Used as a general tonic to improve overall health and vitality.

These traditional uses are based on historical practices, and while some have been supported by modern research, others remain largely anecdotal. Always consult a healthcare professional before using herbal remedies.



Kathurupila (කතුරුපිල), Pila (පිල), Gampila (ගම්පිල) *Tephrosia purpurea* (L.) Pers.

Common Name : Purple Tephrosia, Common Tephrosia, Fish Poison, Wild Indigo

Morphology:

-Growth Habit: Perennial herb or small shrub, typically growing to about 30-60 cm in height. Leaves Pinnate with 7-15 pairs of leaflets; leaflets are oblong to linear and have a silky texture. -Flowers: Small, purplish-pink or violet flowers in axillary or terminal racemes. Fruits: Pods that are linear-oblong, lightly curved, and contain several seeds. Roots: Long and thin taproot, which can sometimes be woody.

Chemical Composition:

Tephrosia purpurea contains various bioactive compounds, including:

Flavonoids: Such as tephrosin, purpurin, and rutin. Glycosides: Including rotenoid glycosides. Isoflavonoids: Such as tephrosin, deguelin, and sarcolobine. Triterpenoids: Including lupeol and betulin.

-Saponins: Known for their medicinal properties. These compounds contribute to its diverse pharmacological properties.

Traditional Use:

Tephrosia purpurea is widely used in traditional medicine across various cultures:

-Antioxidant and Hepatoprotective: Used to protect the liver and combat oxidative stress.

-Anti-inflammatory: Applied in the treatment of inflammation and related conditions.

-Antimicrobial and Antiparasitic: Utilized for its properties against microbes and parasites.

-Digestive Disorders: Used for treating ulcers, indigestion, and other gastrointestinal issues.

-Respiratory Issues: Employed in managing asthma and other respiratory conditions.

-Diuretic and Detoxifying Agent: Helps in detoxification and promotes urination.

-Wound Healing: Applied topically to aid in the healing of wounds and cuts.

-Cancer and Tumor Management: Some studies suggest potential anticancer properties.

These traditional uses have led to various pharmacological investigations, validating some of its therapeutic benefits and indicating its potential in modern medicine.



Rusty Snoutbean *Rhynchosia rufescens*

Family: Fabaceae (Leguminosae)

Morphology:

Subshrubs with trailing branches, glandular-hairy. Leaflets 6.5 x 2.5 cm, ovate, acute, rounded at base; petiole 4-5 cm long; stipules ovate. Flowers in short racemes; calyx 8 mm long, lobes oblong, obtuse; petals included, yellow; standard 7 mm diam., orbicular, glabrous; wings 5 mm long, oblong. Pods 7 x 5 mm, ovoid, turgid, minutely hispid; seed-1, black.

Chemical compounds:

Rhynchosia rufescens may contain various chemical compounds found in plants, such as alkaloids, flavonoids, terpenoids, and phenolic compounds. However, specific compounds for this plant are not readily available.

Therapeutic uses:

An antibiotic, an anti-diabetic, an abortifacient, the healing of wounds, a hepatoprotective, a remedy for rheumatic pains, and a treatment for boils and skin infections.



Makulu (මකුලු) *Hydnocarpus venenatus Gaertn.*

Family: Achariaceae

Morphology:

Hydnocarpus venenatus Gaertn. is a plant species that may have specific characteristics such as its size, leaf shape, flower structure, and fruit appearance.

Chemical compounds:

Hydnocarpus venenatus Gaertn. may contain various chemical compounds found in plants, such as alkaloids, flavonoids, terpenoids, and phenolic compounds. However, specific compounds for this plant are not readily available.

Therapeutic uses:

Skin diseases, Catarrh, Diarrhoea, Syphilis



Kaduru-ketiya wel (කදුරුකැටිය වැල්) *Combretum albidum G.Don*

Family: Combretaceae

Other name: Dhavshira, Manjakody, Menthai Kodi, Okha, Oval-leaved Wheel Creeper

Morphology:

It is a shrub or small tree, typically growing up to 5 meters in height. The leaves are opposite, simple, and elliptic to oblong-elliptic in shape.

Chemical Composition:

contain various bioactive compounds such as flavonoids, tannins, and terpenoids.

Therapeutic Uses:

It is utilized in traditional medicine for various therapeutic purposes, including treating diarrhea, dysentery, and fever. Some studies suggest its potential for antimicrobial and anti-inflammatory properties, although further research is needed to confirm its efficacy and safety for medicinal use.



Heen bebila (හීන් බැබිල)

Sida alnifolia

Family : Malvaceae

Morphology :

it's a perennial shrub with small, elliptical leaves and yellow flowers.

Chemical composition:

Sida alnifolia includes various phytochemicals such as flavonoids, alkaloids, and saponins.

Traditional use:

Sida alnifolia has been used in herbal medicine for its anti-inflammatory, analgesic, and antipyretic properties. Additionally, it has been utilized to treat respiratory ailments like coughs and bronchitis, as well as digestive issues and skin conditions.



Andara (අන්දර)

Dichrostachys cinerea

Family: Fabaceae

other name: sicklebush or bell mimosa

Morphology :

it's a shrub or small tree with distinctive sickle-shaped thorns and pinnate leaves.

chemical composition:

it contains various compounds such as alkaloids, flavonoids, tannins, and saponins.

Therapeutic uses:

it's used in traditional medicine for its anti-inflammatory, analgesic, and antimicrobial properties. It's also employed to treat various ailments like skin infections, gastrointestinal disorders, and respiratory issues.



Wal Koththamalli (වල් කොන්තමල්ලි)

Scoparia dulcis

Family: Plantaginaceae/ Scrophulariaceae

Common name: Sweet broomweed or Licorice weed

Morphology:

Scoparia dulcis is a small, perennial herb with slender stems and small, ovate leaves. The leaves are arranged oppositely on the stem and have a slightly serrated edge. The plant produces small white flowers with purple spots.

Chemical compounds:

Scoparia dulcis contains various chemical compounds, including scopadulcic acid, scopadulciol, and flavonoids such as luteolin and apigenin.

Therapeutic uses:

Scoparia dulcis has been traditionally used in herbal medicine for its anti-inflammatory, antioxidant, and antimicrobial properties. It has been used to treat various ailments such as diabetes, hypertension, and skin infections.



Mora (මොර)

Dimocarpus longan Lour

Family: Sapindaceae

Common name: longan

Morphology:

Longan is a small, round fruit with a thin, brownish skin. The flesh is translucent and juicy, with a single large seed in the center.

Chemical compounds:

Longan contains various chemical compounds, including flavonoids, tannins, and phenolic acids. It is also a good source of vitamins and minerals.

Therapeutic uses:

Longan is believed to have several therapeutic uses in traditional medicine. It is thought to have antioxidant properties, promote relaxation, and improve overall health. Some people also use longan to help with insomnia and anxiety.



Tulsi (तुलसी)

Ocimum tenuiflorum

Common Name: Holy Basil, Sacred Basil

Family : Lamiaceae

Morphology:

Holy basil is an aromatic perennial plant with green or purple leaves that have a strong, clove-like scent. It typically grows up to about 60 cm in height.

Chemical Composition:

Holy basil contains a variety of compounds, including eugenol, caryophyllene, and various flavonoids, which contribute to its aroma and potential health benefits.

Traditional Use:

In traditional medicine systems like Ayurveda, holy basil is highly regarded for its medicinal properties and is used to treat a range of ailments, including respiratory disorders, digestive issues, and stress-related conditions.



Ruck Aththana (රුක් අත්තන)

Alstonia scholaris

Family: Apocynaceae

Common name: Indian devil tree or dita bark tree.

Morphology:

Alstonia scholaris is a medium-sized evergreen tree with a straight trunk and a dense crown. It has smooth, greyish bark and glossy, dark green leaves that are arranged in whorls.

Chemical compounds:

Alstonia scholaris contains various chemical compounds, including alkaloids such as echitamine, echitenine, and alstonine.

Therapeutic uses:

The bark, leaves, and roots of *Alstonia scholaris* have been traditionally used in Ayurvedic medicine for their medicinal properties. Some therapeutic uses include treating fever, diarrhea, dysentery, skin diseases, and respiratory disorders.



Monarakudumbiya (මොණරකුඩුමිලිය)

Vernonia cinerea

Family : Asteraceae

Morphology:

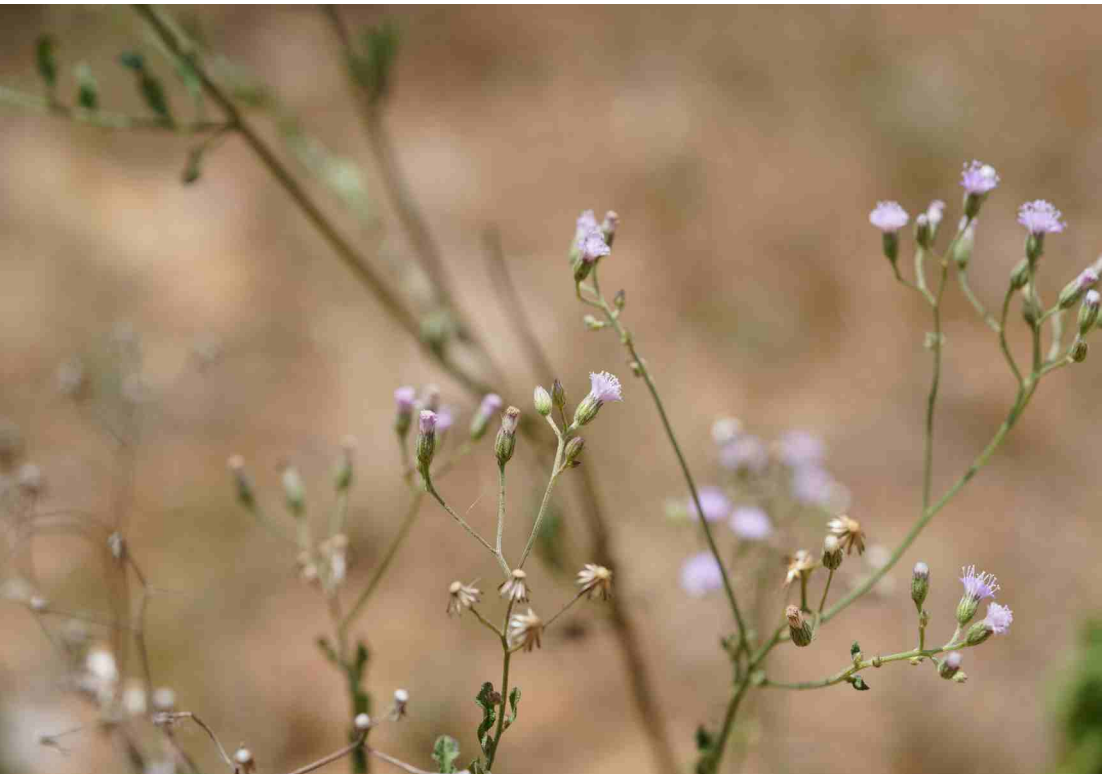
Vernonia cinerea is a small perennial herbaceous plant, typically growing up to about 1 meter in height. Its leaves are lanceolate to elliptic in shape, with serrate margins, and covered in fine hairs. The flowers are small and purple in color, arranged in clusters at the ends of the branches.

Chemical Composition:

Vernonia cinerea contains various phytochemicals, including flavonoids, phenolic compounds, alkaloids, and sesquiterpene lactones. Some of the active compounds found in *Vernonia cinerea* include vernodalol, vernodalin, vernolide, and vernonioside.

Traditional Use:

In traditional medicine, *Vernonia cinerea* has been used for its medicinal properties. It has been employed in various cultures to treat respiratory ailments such as asthma, coughs, and bronchitis. Additionally, it has been used for its anti-inflammatory, analgesic, and antimicrobial properties. In some regions, it is also used as a folk remedy for fever and to promote wound healing.



Kudu Mirisa (කුඩු මිරිස)

Zanthoxylum asiaticum

Family: Moraceae

Morphology:

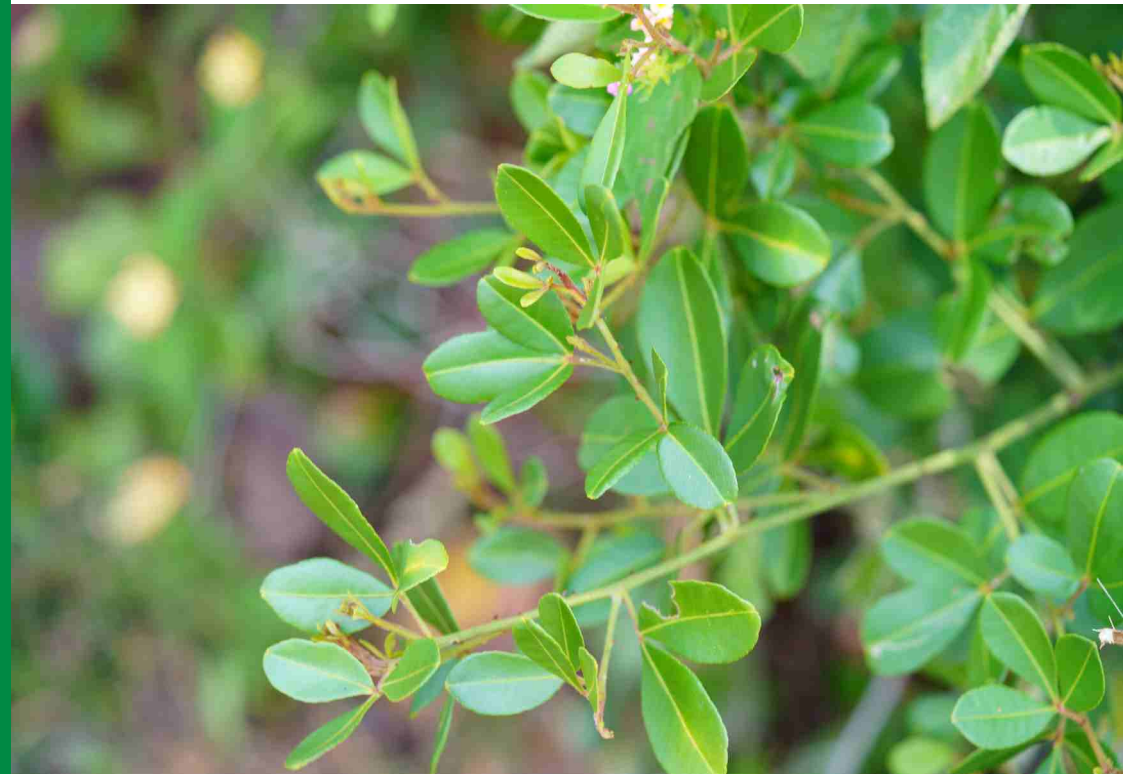
Ficus sarmentosa is a climbing or trailing plant with thin, flexible stems. It has heart-shaped leaves that are green and glossy, with a pointed tip. The plant produces small, round fruits that are green when unripe and turn purple when mature.

Chemical Composition:

The chemical composition of *Ficus sarmentosa* may vary, but it is known to contain various bioactive compounds such as: Flavonoids, Phenolic compounds, Tannins, Alkaloids, Terpenoids

Therapeutic Uses:

Ficus sarmentosa is used in traditional medicine for various therapeutic purposes, including: Anti-inflammatory properties, Antioxidant effects, Wound healing, Digestive aid, Treatment of skin conditions, Antimicrobial properties



Mudamahana (මුදුමහණ)

Sphaeranthus indicus L.

Family: Asteraceae

Other name: East Indian Globe Thistle, Indian sphaeranthus

Morphology:

Perennial herb with small, yellow flowers. It typically grows in sandy or rocky soils in tropical regions.

Chemical Composition:

The plant contains various bioactive compounds such as flavonoids, alkaloids, terpenoids, and essential oils. Specific compounds include sphaeranthanolide and 7-hydroxyfrullanolide, which are believed to contribute to its therapeutic properties.

Therapeutic Uses:

In traditional medicine systems like Ayurveda, used for its various therapeutic properties. It is believed to have anti-inflammatory, anti-microbial, anti-diabetic, hepatoprotective, and anti-cancer properties. It's also used for its effects on skin conditions, digestion, and as a general health tonic.



Kepum keeriya (කැපුම් කීරිය)

Euphorbia hirta

Common Name: Hairy Spurge, Ara Tanah, Asthma Weed, snake weed

Morphology:

It's a hairy, annual herb with an erect stem that can grow up to 30-40 cm tall. The leaves are opposite, oblong, and covered with hairs. The flowers are small and greenish-yellow, grouped in small clusters.

Chemical Composition:

Euphorbia hirta contains various compounds, including alkaloids, flavonoids, tannins, saponins, and terpenoids.

Traditional Use:

It's been used traditionally in many cultures for various medicinal purposes, including treating asthma, coughs, bronchitis, and other respiratory conditions. Additionally, it has been used for its anti-inflammatory, analgesic, and anti-bacterial properties. However, it's essential to use caution with its use, as some parts of the plant can be toxic if ingested in large quantities.



Endaru (චිඤරු) ***Ricinus communis***

Morphology:

It's a flowering plant with large, palmately lobed leaves. The seeds are notable for their large size and distinctive pattern.

Chemical Composition:

Ricin, a highly toxic protein, is found in the seeds. The oil extracted from the seeds contains triglycerides, mainly ricinolein.

Traditional Use:

Historically, the oil extracted from its seeds has been used medicinally, primarily as a laxative. Additionally, castor oil has been used in cosmetics and manufacturing processes.



Kahipiththan (කැහිපිත්තන්) ***Cyclea peltata***

Morphology:

Cyclea peltata typically features peltate leaves, meaning the leaf stalk is attached to the center of the leaf rather than at the margin. It's a climbing vine with tendrils for support.

Chemical Composition:

The chemical composition of *Cyclea peltata* includes various compounds such as alkaloids, flavonoids, and other secondary metabolites. These compounds contribute to its pharmacological properties and traditional uses.

Traditional Use:

In traditional medicine, *Cyclea peltata* has been used for various purposes, including its purported anti-inflammatory, analgesic, and antioxidant properties. It has also been used in some regions for its supposed effects on reproductive health and as a remedy for snakebites.



Magul karanda (මගුල් කරඳ) Gal karanda (ගල් කරඳ) Karanda (කරඳ) *Pongamia pinnata*

Morphology:

The tree typically grows up to 15-25 meters in height, with a spreading canopy. It has compound leaves and produces small, purplish-white flowers followed by flattened pods containing seeds.

Chemical Composition:

The seeds of *Pongamia pinnata* contain bioactive compounds like pongamol, karanjin, and flavonoids. These compounds have various biological activities and are being researched for potential applications in medicine, agriculture, and industry.

Traditional Use:

In traditional medicine, various parts of the *Pongamia pinnata* tree have been used to treat skin diseases, wounds, rheumatism, and inflammation. Additionally, the oil extracted from the seeds has been used for lighting lamps, making soaps, and as a biodiesel.



Katupila (කටුපිල) *Flueggea leucopyrus*

Common Name: White Honey Shrub or Snowberry Bush.

Family: Phyllanthaceae.

Morphology:

Flueggea leucopyrus is a shrub with small, white berries. It has simple, alternate leaves and small greenish-white flowers.

Chemical Compounds:

Flueggea leucopyrus contains various chemical compounds such as alkaloids, flavonoids, tannins, and saponins.

Therapeutic Uses:

Flueggea leucopyrus is used in traditional medicine for its anti-inflammatory, analgesic, and antipyretic properties. It is also used to treat skin diseases, respiratory disorders, and digestive issues.



Andana Hriya(අධන හීරිය)

Crotalaria verrucosa

Blue-Flowered Rattlepod, Blue Rattlepod, Blue Rattlesnake

Morphology:

Crotalaria verrucosa is a perennial shrub characterized by its erect growth habit and distinctive yellow flowers. It typically grows up to 1-2 meters in height and has narrow, lanceolate leaves.

Chemical Composition:

Crotalaria species are known to contain various chemical compounds, including alkaloids, flavonoids, tannins, and saponins. These compounds may have pharmacological properties and are often studied for their potential medicinal uses.

Traditional Use:

In traditional medicine systems, some *Crotalaria* species have been used for their medicinal properties. However, specific traditional uses of *Crotalaria verrucosa* may vary depending on the region and cultural practices. It's essential to note that while some plants within the *Crotalaria* genus have medicinal uses, others can be toxic if consumed in large quantities or not properly processed. Therefore, it's crucial to consult reliable sources and experts before using any plant for medicinal purposes.



Iramusu (ඉරමුසු) Heen iramusu (හීන් ඉරමුසු)

Hemidesmus indicus

Morphology:

Hemidesmus indicus is a slender, twining, perennial herb with woody roots. It has long, slender, lanceolate leaves and small, fragrant, pink or purplish flowers.

Chemical Composition:

The plant contains several chemical compounds, including coumarins, flavonoids, alkaloids, and triterpenoids. The main bioactive compounds responsible for its medicinal properties are smilagenin and sarsasapogenin.

Traditional Use:

In traditional medicine, particularly in Ayurveda and Siddha systems, *Hemidesmus indicus* is used for its various medicinal properties. It is believed to have anti-inflammatory, antipyretic, diuretic, and antioxidant properties. It is often used to treat skin diseases, rheumatism, urinary disorders, and as a general tonic. Additionally, it is used as an ingredient in various formulations for its blood purifying and detoxifying



False Guava, Gela *Catunaregam spinosa*

Morphology:

The Indian Almond is a small to medium-sized tree with thorny branches. Its leaves are glossy, ovate to elliptic, and arranged oppositely on the stem. The tree produces small white flowers, followed by orange or red fruit containing a single seed.

Chemical composition:

Various compounds have been identified in *Catunaregam spinosa*, including alkaloids, flavonoids, tannins, and saponins. These compounds contribute to its medicinal properties.

Traditional use:

In traditional medicine, different parts of the Indian Almond tree are used to treat various ailments. For example, the bark is used as an astringent and in the treatment of diarrhea, dysentery, and skin diseases. The leaves are used in the treatment of fever, wounds, and as a poultice for rheumatism. The fruits are consumed for their nutritional value and are believed to have medicinal properties as well.



Kohomba (කොහොඹ) *Azadirachta indica*

Morphology:

Neem trees are medium to large-sized evergreen trees, reaching up to 15-20 meters in height. They have dense, spreading crowns and are known for their bitter-tasting leaves, fragrant white flowers, and small olive-like fruits.

Chemical composition:

Neem is rich in bioactive compounds such as azadirachtin, nimbin, nimbidin, nimbolide, and quercetin. These compounds are responsible for its various medicinal properties and insecticidal effects.

Traditional use:

Neem has a long history of traditional use in various cultures for its medicinal properties. It has been used in Ayurvedic medicine for over 2,000 years to treat a wide range of ailments, including skin disorders, digestive issues, and infections. Additionally, neem has been traditionally used as a natural pesticide, insect repellent, and fertilizer in agriculture.



Crown flower (ඉරි)

Calotropis gigantea

Family: Apocynaceae

Morphology:

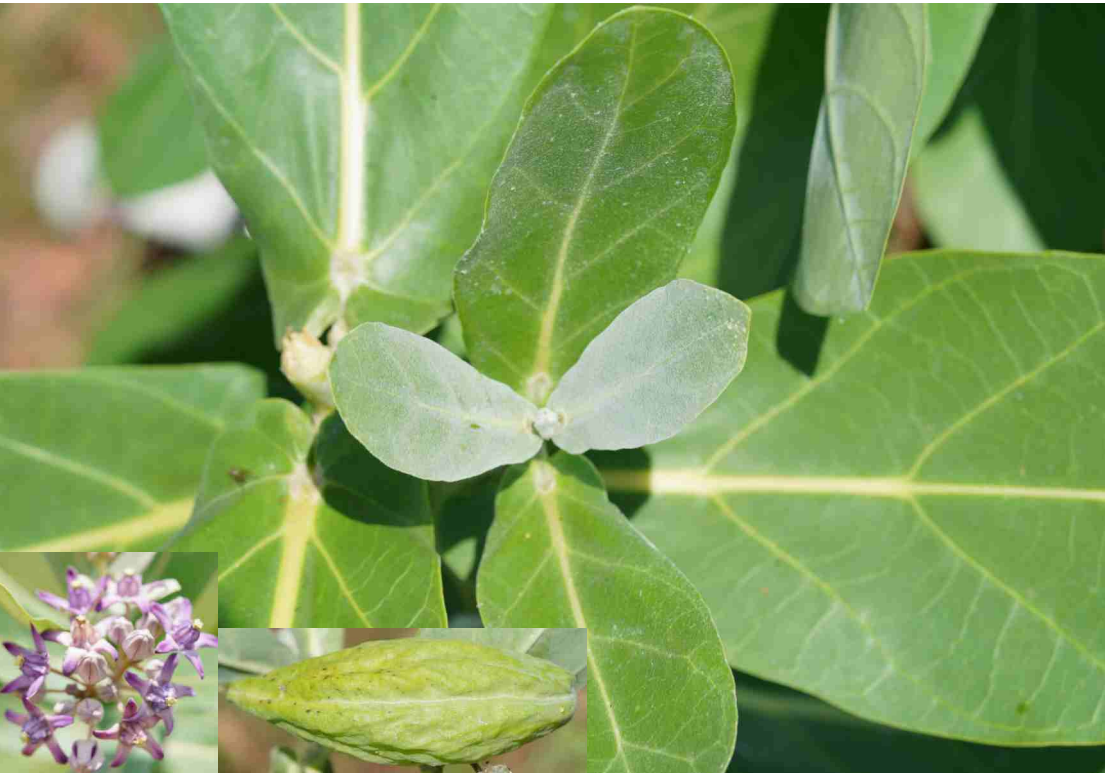
Calotropis gigantea is a perennial shrub or small tree with thick, oval leaves. Its flowers are unique, with five pointed petals, and often appear in clusters. The plant produces large, inflated seed pods containing numerous seeds with silky hairs.

Chemical composition:

Calotropis gigantea contains various chemical compounds, including alkaloids, glycosides, flavonoids, and cardiac glycosides like calotropin.

Traditional use:

In traditional medicine, various parts of the plant are used to treat a range of ailments. The latex from the plant is used to treat skin diseases and as a remedy for snakebites. Extracts from the roots and leaves are used for their anti-inflammatory and analgesic



Wel keliya (වැල් කැලිය)

Grewia orientalis.

Morphology :

it's characterized by its small, star-shaped lavender flowers and glossy green leaves. It typically grows up to 3 meters in height.

Chemical composition :

it contains various phytochemicals, including flavonoids, alkaloids, and tannins. These compounds contribute to its medicinal properties.

Traditional use:

Grewia orientalis has been used for various purposes, including treating coughs, colds, and fever. It's also been used topically for skin conditions and internally for gastrointestinal issues. Additionally, some cultures use it as a food source or for making traditional beverages.



Gandapana (ଗନ୍ଧପାନା)

Lantana camara

Common Name: Lantana

Morphology:

Lantana is a flowering plant with clusters of small, brightly colored flowers. It's often grown as an ornamental plant due to its vibrant blooms.

Chemical Composition:

Lantana contains various compounds, including triterpenoids, flavonoids, and alkaloids. These chemicals contribute to its aroma and potential medicinal properties.

Traditional Use:

Lantana has been used traditionally in herbal medicine for various purposes, including treating respiratory conditions, gastrointestinal issues, and skin ailments. However, it's important to note that some parts of the plant can be toxic if ingested.



Wal Pichcha (ଉର୍ଳ ଡିସିଓ)

Jasminum angustifolium

Morphology:

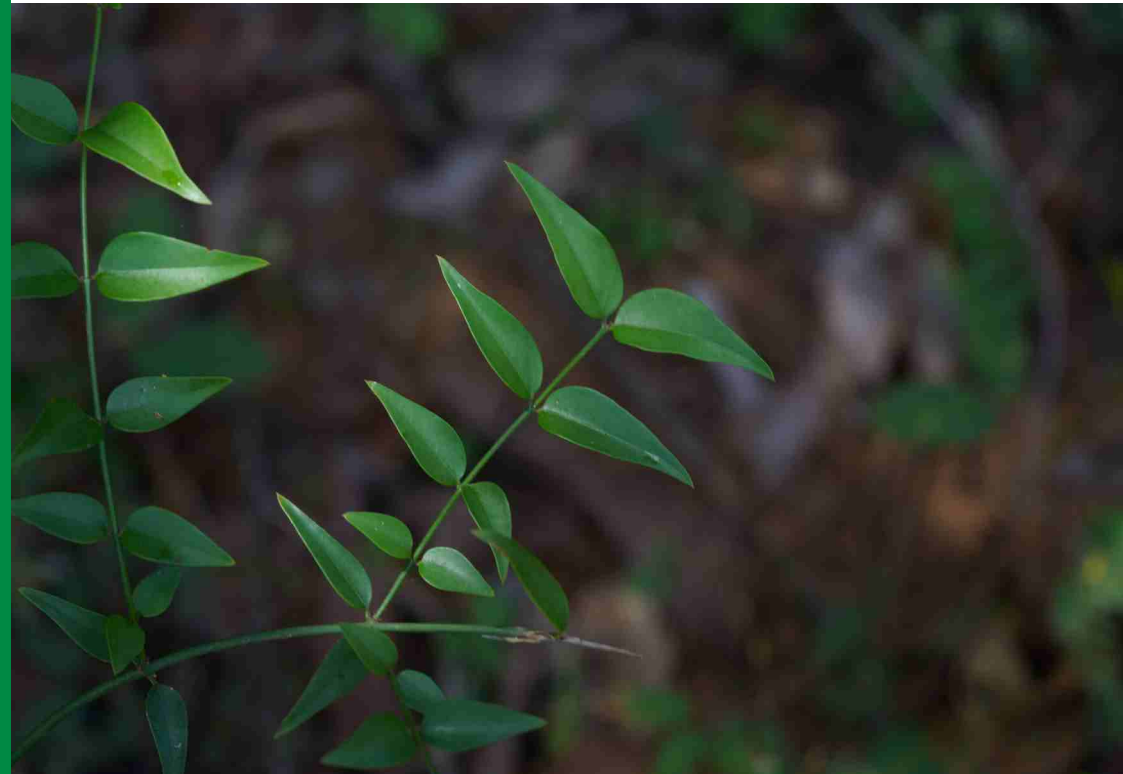
Jasminum angustifolium is a woody climber with narrow leaves and fragrant white flowers.

Chemical Composition:

The chemical composition of *Jasminum angustifolium* includes various compounds such as benzyl acetate, benzyl alcohol, linalool, and methyl jasmonate, which contribute to its aromatic properties and potential therapeutic benefits.

Therapeutic Uses:

In traditional medicine, *Jasminum angustifolium* is used for its therapeutic properties, including its calming and sedative effects. It is often used in aromatherapy for stress relief and relaxation.



Heen Eraminiya (හීන් එරමිනිය)

Zizyphus oenopila

Common Name: Indian Jujube

Morphology:

Zizyphus oenopila is a small tree or shrub with thorny branches. The leaves are shiny, alternate, ovate to elliptic, and serrated. The flowers are small, greenish-yellow, and inconspicuous. The fruits are small, round, and turn from green to yellowish-brown when ripe.

Chemical Composition:

The chemical composition of *Zizyphus oenopila* includes flavonoids, tannins, saponins, and triterpenoids.

Therapeutic Uses:

In traditional medicine, various parts of *Zizyphus oenopila* are used to treat conditions such as diarrhea, dysentery, fever, and respiratory infections. The fruits are also consumed as a nutritious food and are believed to have digestive and antioxidant properties.



Mayil (මයිල)

Bauhinia malabarica

Morphology:

Bauhinia malabarica is a medium-sized deciduous tree. It has distinctive bilobed leaves resembling a pair of butterfly wings. The flowers are usually white or pink and are borne in clusters. The fruit is a long pod containing seeds.

Chemical Composition:

The chemical composition of *Bauhinia malabarica* includes various compounds such as flavonoids, alkaloids, tannins, and phenolics.

Therapeutic Uses:

In traditional medicine, various parts of the *Bauhinia malabarica* tree are used for their therapeutic properties. The bark is known for its astringent and anti-inflammatory properties and is used to treat various skin ailments. The leaves are used in herbal preparations for their potential anti-diabetic and anti-inflammatory effects. Additionally, different parts of the tree are also used in folk medicine for treating gastrointestinal disorders, wounds, and as a general tonic.



Native rosella *Hibiscus lobatus*

Morphology:

Hibiscus lobatus is a shrub or small tree that can grow up to 5 meters in height. It has large, lobed leaves and produces showy, red or orange flowers.

Chemical Composition:

The chemical composition of *Hibiscus lobatus* includes flavonoids, anthocyanins, and other polyphenolic compounds.

Therapeutic Uses:

In traditional medicine, *Hibiscus lobatus* is used to treat various ailments including digestive issues, respiratory problems, and as a diuretic. Additionally, it has been studied for its potential antioxidant and hepatoprotective properties.



Helamba (ଅରଳଝି) *Mitragyna parvifolia* (Roxb.) Korth.

Family: Rubiaceae

Common Name: Kaim, Kaim Plant

Morphology:

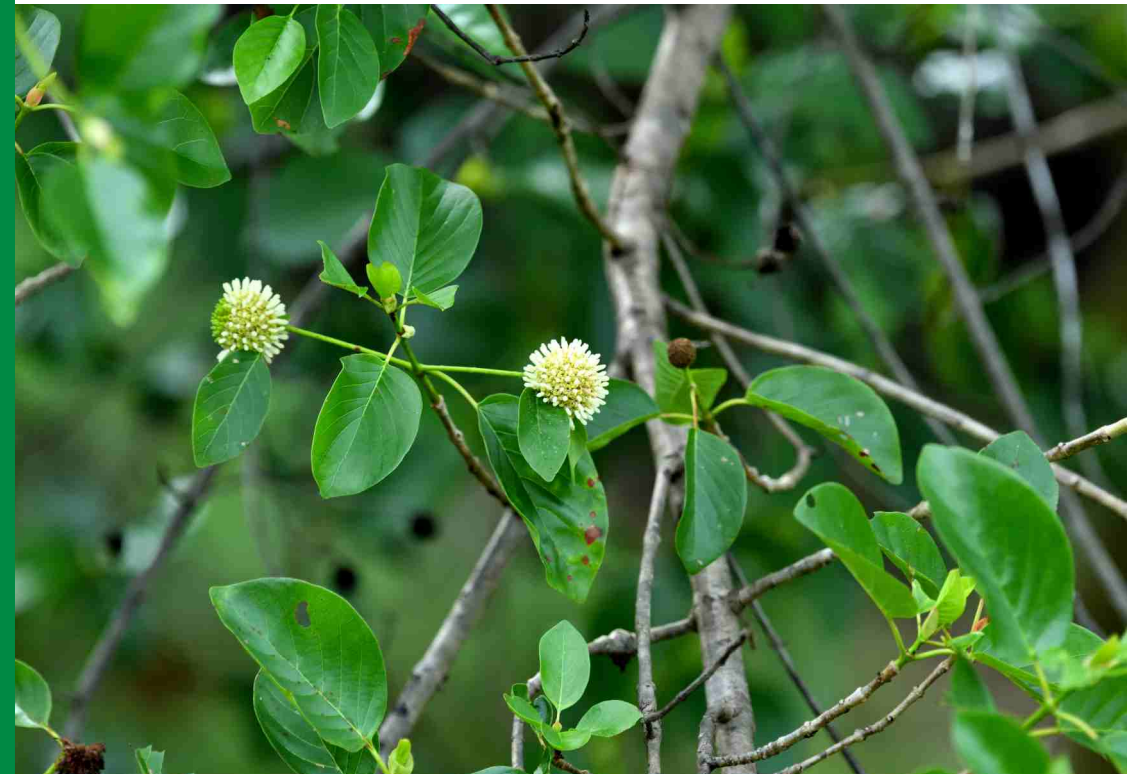
It's a medium-sized tree with dense foliage and small, greenish-white flowers. The leaves are elliptical, glossy, and leathery.

Chemical Composition:

it contains alkaloids similar to those found in *Mitragyna speciosa*, such as mitragynine, which is known for its psychoactive properties.

Therapeutic Uses:

it's used in traditional medicine for various purposes, including pain relief, as a mood enhancer, and for its stimulant effects.



Daminiya (දමිණි)

Grewia tiliifolia

Common name: Linden-leaved grewia

Morphology:

Grewia tiliifolia is a small tree or large shrub that grows up to 4 meters tall. The leaves are alternate, simple, and ovate to orbicular in shape, with toothed margins. The flowers are small, yellow, and borne in clusters. The fruit is a small, round, edible berry that turns purplish-black when ripe.

Chemical composition:

The chemical composition of *Grewia tiliifolia* includes various phytochemicals such as flavonoids, tannins, saponins, and phenolic compounds.

Therapeutic uses:

The leaves are used traditionally in the treatment of various ailments such as diarrhea, dysentery, and stomach disorders. The bark is used as a chewing stick for oral hygiene. The fruit is edible and is consumed fresh or processed into jams and jellies.



Ehela (අහළු)

Cassia fistula

Common name: Golden shower tree, Indian laburnum

Morphology:

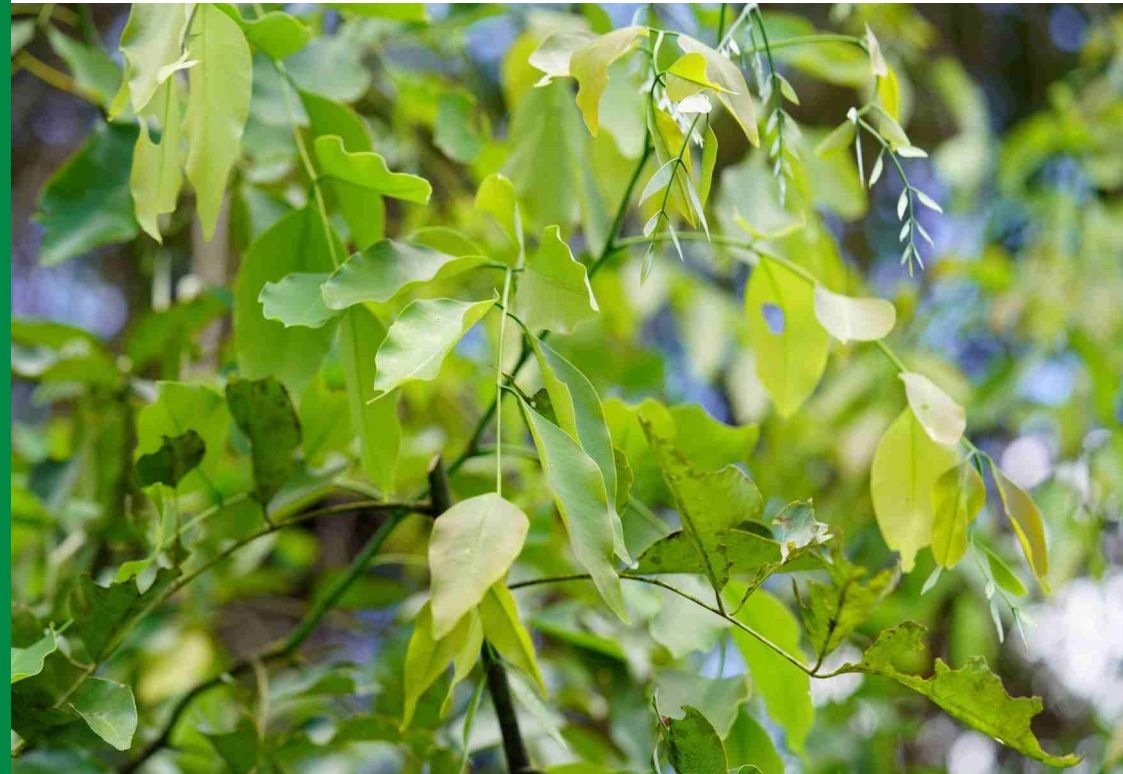
Cassia fistula is a medium-sized deciduous tree that can grow up to 10-20 meters in height. The leaves are compound, with 6-8 pairs of leaflets. The flowers are bright yellow and occur in pendulous racemes. The fruit is a long, cylindrical, dark brown pod containing numerous seeds embedded in a sticky, sweet pulp.

Chemical composition:

The chemical constituents of *Cassia fistula* include anthraquinones, flavonoids, saponins, tannins, and other compounds.

Therapeutic uses:

Cassia fistula has various medicinal properties and is used in traditional medicine systems. It is used as a laxative and is effective in the treatment of constipation. The pulp of the fruit is used to prepare a tonic that is believed to be beneficial for the skin. It also has antimicrobial and antioxidant properties. Various parts of the plant are used in the treatment of different ailments such as cough, fever, inflammation, and skin diseases.



Ali thala (අලි තල) *Ballota suaveolens* L.

Common name: Desert Mint

Morphology:

Ballota suaveolens is a perennial herb with erect stems growing up to 40–80 cm tall. It has opposite, oval to lance-shaped, grayish-green leaves with toothed margins. The flowers are small, whitish, and arranged in dense clusters at the top of the stems.

Chemical composition:

Ballota suaveolens contains various bioactive compounds such as flavonoids, phenolic acids, terpenoids, and essential oils.

Therapeutic uses:

In traditional medicine, *Ballota suaveolens* has been used for its medicinal properties. It is used as a remedy for respiratory conditions such as coughs, bronchitis, and asthma. It also has digestive properties and is used to stimulate appetite and aid digestion. Additionally, it has been used as a mild sedative and to relieve anxiety. However, further research is needed to confirm its therapeutic effects and safety.



Beheth Anoda (බෙහෙත් අනෝදා) *Abutilon indicum*

Common name: Indian mallow, Country mallow

Morphology:

Abutilon indicum is a perennial shrub with ovate to elliptic leaves and yellow flowers. The plant grows up to 2 meters in height.

Chemical composition:

Abutilon indicum contains various bioactive compounds such as alkaloids, flavonoids, glycosides, saponins, tannins, and phenolic compounds.

Therapeutic uses:

In traditional medicine, different parts of *Abutilon indicum* are used to treat various ailments. It is used as an anti-inflammatory, analgesic, antipyretic, diuretic, and expectorant. The plant is also used to treat respiratory diseases such as coughs, colds, and asthma. Additionally, it is used to treat skin diseases, digestive disorders, and as an aphrodisiac. However, it is important to note that the plant should be used with caution as excessive consumption may lead to toxicity.



Seru (සේරු) *Premna tomentosa*

Common name: Yellow Elder, Indian Privet

Morphology:

Premna tomentosa is a perennial shrub or small tree with opposite leaves that are covered with dense yellowish tomentum (hairs). The flowers are small, white, and arranged in dense clusters.

Chemical composition:

Premna tomentosa contains various bioactive compounds such as alkaloids, flavonoids, phenolic compounds, and terpenoids.

Therapeutic uses:

In traditional medicine, various parts of *Premna tomentosa* are used to treat different ailments. It is used as a remedy for fever, inflammation, rheumatism, and as a diuretic. Extracts from the plant are also used for their antimicrobial, antioxidant, and anticancer properties. Additionally, it is used in the treatment of respiratory disorders such as coughs and colds.



Heen Aniththa (හීන් අනිත්ත) *Rhinacanthus polonnaruwensis*

Morphology:

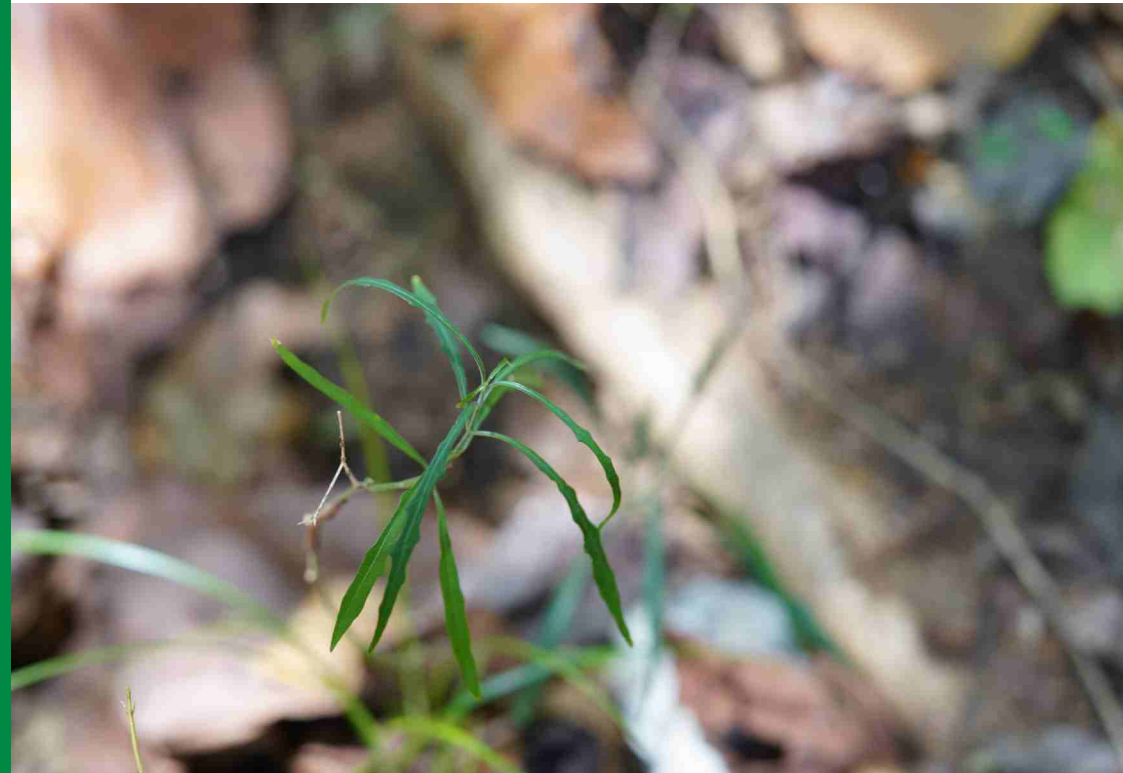
Rhinacanthus polonnaruwensis is a perennial herb with a woody base. Unfortunately, specific morphological details about *Rhinacanthus polonnaruwensis* are limited.

Chemical composition:

Detailed information about the chemical composition of *Rhinacanthus polonnaruwensis* is not readily available. However, other species within the *Rhinacanthus* genus have been reported to contain various bioactive compounds such as alkaloids, flavonoids, phenolic compounds, and terpenoids.

Therapeutic uses:

Limited information is available regarding the therapeutic uses of *Rhinacanthus polonnaruwensis*. However, other species within the *Rhinacanthus* genus have been used in traditional medicine for various purposes such as treating skin diseases, diabetes, inflammation, and as an antioxidant. Further research would be needed to determine the specific therapeutic uses of *Rhinacanthus polonnaruwensis*.



Korakaha (කොරකහ)

Memecylon umbellatum Burm.f.

Family: Melastomataceae

Other name: Iron Wood Tree, Blue Mist

Morphology:

commonly known as Ironwood tree or Kaatumari in Tamil Nadu, India, is a small evergreen tree or shrub. It typically grows up to 5-10 meters in height, with glossy, elliptic leaves and small purple flowers arranged in clusters.

Chemical Composition:

The chemical composition of includes various phytochemicals such as flavonoids, tannins, alkaloids, and phenolic compounds. These compounds contribute to its medicinal properties.

Therapeutic Uses:

In traditional medicine, various parts of used to treat a range of ailments. The leaves are used in the treatment of skin diseases, ulcers, and wounds due to their antimicrobial and wound-healing properties. The bark and roots are used in formulations to treat diarrhea, dysentery, and fever. Additionally, the plant has been studied for its antioxidant, anti-inflammatory, and anti-diabetic properties, showing potential therapeutic benefits in these areas as well.



Dambu (දඹු)

Lepisanthes tetraphylla (Vahl) Radlk.

Family : Sapindaceae

Morphologically:

characterized by its four leaflets and small, reddish fruit.

Chemical composition:

includes various bioactive compounds such as flavonoids, tannins, and alkaloids, which contribute to its therapeutic properties.

Traditional medicinal :

uses include being used as an antidiabetic, anti-inflammatory, antimicrobial, and antioxidant agent. It's also employed in the treatment of gastrointestinal disorders and skin ailments.



Kubuk (കുരൂപ്പ)

Terminalia arjuna

Family: Combretaceae

Morphology:

typically have a cone-shaped crown, with drooping branches. The bark is smooth and grey, with a characteristic cracked appearance

Chemical compound:

contains various compounds, including flavonoids, tannins, triterpenoid saponins, and minerals.

Therapeutic uses:

In traditional medicine, various parts of used for their medicinal properties. It is particularly known for its beneficial effects on the cardiovascular system. It is used in Ayurveda for conditions like hypertension, angina, and dyslipidemia. Additionally, it is believed to have antioxidant and anti-inflammatory properties.



Bolpana (ബോൾപ്പന)

Glycosmis angustifolia Lindl. ex Wight & Arn.

Family: Rutaceae

Morphology :

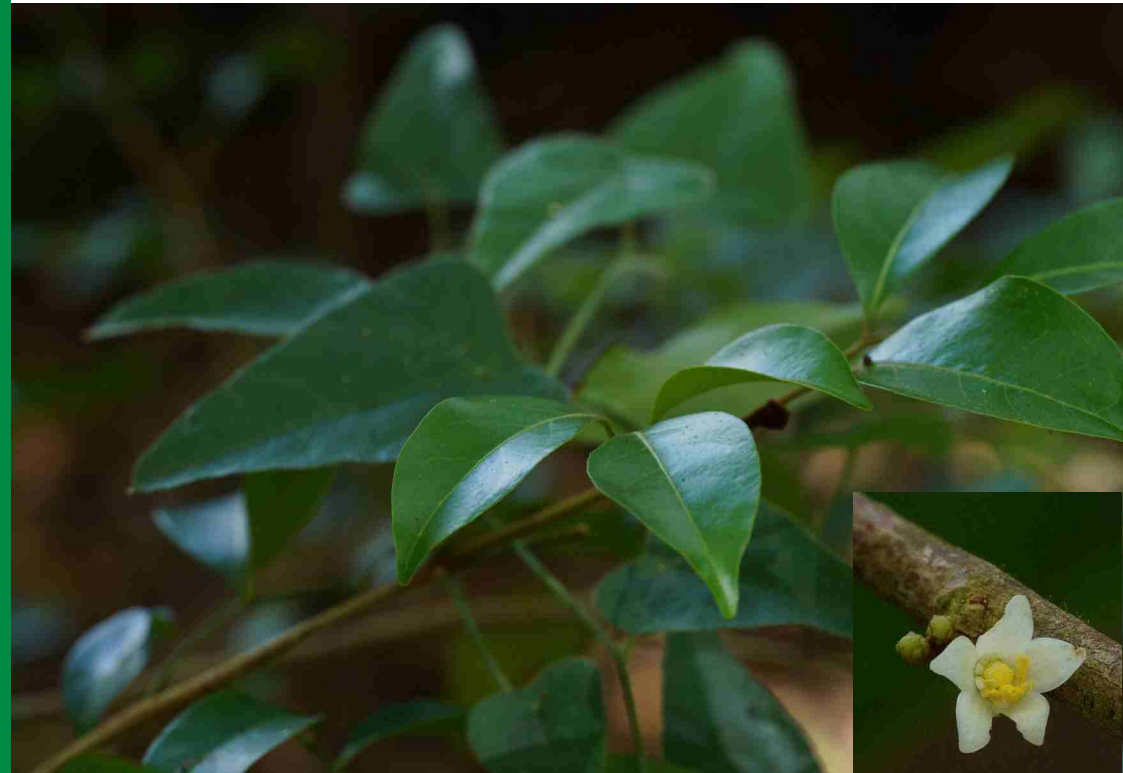
It's a shrub or small tree with narrow leaves and small white flowers. The fruits are small, round, and often red or orange when ripe

Chemical Composition :

Contains various compounds, including alkaloids, flavonoids, and terpenoids, Specific compounds may include glycosides, coumarins, and saponins

Therapeutic Uses :

Traditionally, different parts of used in folk medicine for various purposes. Potential therapeutic uses may include anti-inflammatory, antioxidant, and antimicrobial properties. Further research is needed to fully understand and validate its medicinal benefits For more detailed information, scientific literature and botanical databases would be useful resources.



Karamba (කරඹ)

Carissa spinarum L.

Family: Apocynaceae

Other name: Wild Karanda, Num Num, Carissa, Conkerberry, Bush Plum

Morphology:

Carissa spinarum, commonly known as conkerberry or bush plum, is a thorny, evergreen shrub or small tree. Typically grows up to 2-3 meters tall. The leaves are simple, opposite, and oblong-elliptic in shape, with a glossy, dark green surface. They are leathery and measure around 2-5 cm in length. The plant has sharp, forked thorns, which are a characteristic feature. Flowers Small, white or pale pink, star-shaped flowers, often fragrant. They are typically found in clusters. Fruit Produces small, round, red to purple-black berries that are edible. The fruit is about 1-1.5 cm in diameter and contains numerous small seeds.

Chemical Composition:

Alkaloids: Contains various alkaloids such as carissone, carindone, and carinol.

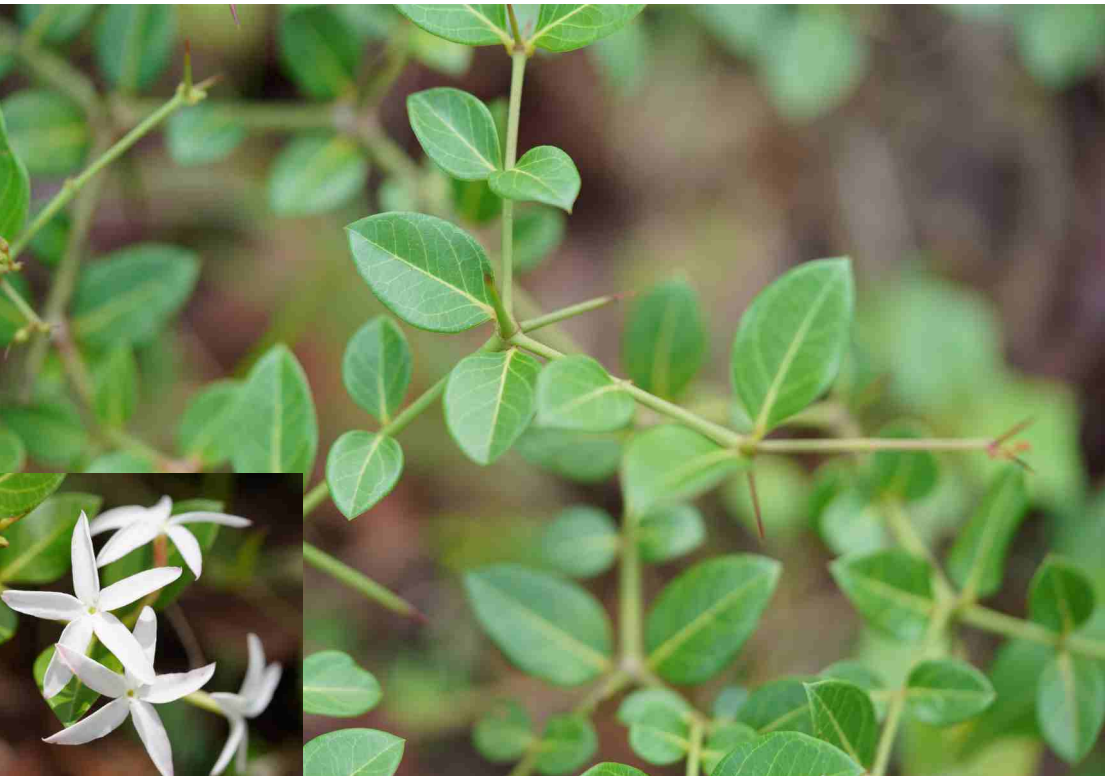
Glycosides: Includes cardiac glycosides like carissin.

Flavonoids: Rich in flavonoids, including kaempferol and quercetin.

Triterpenoids: Contains ursolic acid and its derivatives.

Therapeutic Uses:

- Antimicrobial: Exhibits antibacterial and antifungal properties, effective against various pathogens.
- Antioxidant: The plant's extracts show significant antioxidant activity, which helps in combating oxidative stress.
- Cardioprotective: Contains compounds that are beneficial for heart health, helping to strengthen cardiac function.
- Anti-inflammatory: Used in traditional medicine to reduce inflammation and treat conditions like arthritis.
- Wound Healing: Promotes faster wound healing and is used in treating skin infections and injuries.
- Digestive Health: The fruit and other parts of the plant are used to treat digestive disorders, including diarrhea and dysentery.
- Antidiabetic: May help in managing blood sugar levels and is used in traditional remedies for diabetes.



Kadupahara (කඩුපහර)

Emilia sonchifolia (L.) DC.

Family: Asteraceae

Morphology:

It typically grows as an annual herb, reaching heights of up to 1 meter. It bears small lilac or pink flowers in clusters atop slender stems, with narrow leaves.

Chemical composition:

contains various phytochemicals such as flavonoids, alkaloids, saponins, and terpenoids.

Therapeutic uses:

In traditional medicine, used for its potential therapeutic properties, including anti-inflammatory, antioxidant, antimicrobial, and anticancer effects. It has also been utilized to treat conditions such as coughs, asthma, skin diseases, and digestive issues.



Karal heba (කරල්හෙබා) *Achyranthes aspera* L.

Family: Amaranthaceae

Other Names: devil's horsewhip , Devil's Horsewhip

Morphology:

an erect, sometimes sprawling, long-lived herb which can grow up to 2 m tall, with stems becoming woody at the base

chemical composition:

contains triterpenoid saponins which possess oleanolic acid as the aglycone

Therapeutic uses:

used in the treatment of boils, asthma, in facilitating delivery, bleeding, bronchitis, debility, dropsy, cold, colic, cough, dog bite, snake bite, scorpion bite, dysentery, earache, headache, leukoderma, renal complications, pneumonia, and skin diseases.



Thel kola (තැල් කොළ) *Ipomoea sagittifolia* Burm.f

Family: Convolvulaceae

Morphology:

commonly known as beach morning glory, is a perennial vine with slender stems that can grow up to several meters in length. The leaves are heart-shaped or arrowhead-shaped, glossy, and typically 5-10 cm long. The flowers are trumpet-shaped and vary in color from white to pink or purple, blooming in clusters.

Chemical Composition:

The chemical composition of includes various phytochemicals such as flavonoids, alkaloids, tannins, saponins, and phenolic compounds.

Therapeutic Uses:

used in traditional medicine for various therapeutic purposes. Some reported uses include:

Treatment of skin disorders: It is believed to have anti-inflammatory and wound-healing properties, making it useful in treating skin conditions like eczema, dermatitis, and burns. Respiratory ailments: In some traditional practices, it is used to alleviate symptoms of respiratory disorders like asthma and cough. Antioxidant properties: Compounds found in *Ipomoea littoralis* may possess antioxidant properties, which could help combat oxidative stress and reduce the risk of chronic diseases. Other potential uses: It has been suggested to have antimicrobial, antidiabetic, and hepatoprotective properties, although more research is needed to confirm these effects. As with any herbal remedy, it's essential to consult healthcare professionals before using *Ipomoea littoralis* for therapeutic purposes, especially if you have pre-existing health conditions or are taking medication.



Pupula (පුපුළ)

Jeffreycia zeylanica (L.) H.Rob., SCKeeley & Skvarla

Family : ASTERACEAE

Other name: Heen botiya ,Papula ,Wail pupula

Morphology :

perennial herb with erect stems, ovate to elliptic leaves, and bright blue to violet flowers. It grows up to a meter tall and produces a small, elongated capsule with seeds. Known for its well-drained soil and shaded environments.

Chemical Composition:

It contains bioactive compounds like flavonoids, alkaloids, and phenolic acids, which contribute to its antioxidant and anti-inflammatory effects. The essential oils also contain volatile compounds, making it valuable in traditional medicine.

Therapeutic Uses:

used in traditional medicine for its anti-inflammatory, analgesic, antioxidant, antimicrobial, and diuretic properties, highlighting its potential for further research.



Geta nitul (ගැට නිතුල්)

Streblus asper Lour.

Family: Moraceae

Other name: Sand Paper Tree,Crooked Rough Bush,Siamese Rough Bush,Toothbrush Tree

Morphology:

It is a rigid shrub or gnarled tree; branchletstomentose or pubescent. Leaves are 2–4 inch, rigid, elliptic, rhomboid, ovate or obovate, irregularly toothed; petiole 1/12 inch. Male heads globose, solitary or 2-nate, sometimes androgynous; peduncle short scabrid, flowers minute 2. Female flowers longer peduncled.

Chemical Composition:

The volatile oil from fresh leaves of *S. asper* was obtained in 0.005% yield as a brown liquid. The major constituents of the volatile oil reported are phytol (45.1%), a-farnesene (6.4%), trans-farnesyl acetate (5.8%), caryophyllene (4.9%) and trans-trans-a-farnesene (2.0%)

Therapeutic Uses:

Various parts of this plant are used in Ayurveda and other folk medicines for the treatment of different ailments such as filariasis, leprosy, toothache, diarrhea, dysentery and cancer.



Yakada wel (යකඩ වැල්)

Artabotrys zeylanicus Hook.f. & Thomson

Family: Annonaceae

Other name: Patika wel ,Kalu bambara wel

Morphology:

It is a rigid shrub or gnarled tree; branchletstomentose or pubescent. Leaves are 2–4 inch, rigid, elliptic, rhomboid, ovate or obovate, irregularly toothed; petiole 1/12 inch. Male heads globose, solitary or 2-nate, sometimes androgynous; peduncle short scabrid, flowers minute 2. Female flowers longer peduncled.

Chemical Composition :

The major constituents of the volatile oil reported are phytol (45.1%), α -farnesene (6.4%), trans-farnesyl acetate (5.8%), caryophyllene (4.9%) and trans-trans- α -farnesene (2.0%)

Therapeutic Uses:

Various parts of this plant are used in Ayurveda and other folk medicines for the treatment of different ailments such as filariasis, leprosy, toothache, diarrhea, dysentery and cancer.



Diyamiththa (දියමිත්ත)

Cissampelos pareira L.

Family : MENISPERMACEAE

Other name: Velvet Leaf

Morphology:

Morphology. It is a slender tomentose climber. The leaves are peltate, 2.5–12 cm long, 2.5–11.5 cm broad, triangularly broad-ovate, or orbicular, obtuse, mucronate, base cordate or truncate, \pm tomentose on both sides; petiole pubescent. Flowers are small in size, pedicels filiform.

Chemical Composition :

The chemical fingerprinting of *C. pareira* carried out using HPTLC, HPLC, UPLC, LC-MS, and GC-MS, revealed the presence of alkaloids (isoquinoline alkaloids), fatty acids, and flavonoid glycosides

Therapeutic Uses:

used in the treatment of chronic non-healing ulcers and sinuses.



Neeramulliya (කීරමුල්ලිය)

Hygrophila auriculata (Schumach.) Heine

Family: Acanthaceae

Other name: Katu ikiriya ,Ikiriya

Morphology:

It is a herbaceous plant with succulent leaves, typically found in tropical regions. The leaves are opposite, lanceolate, and serrated.

Chemical composition:

The plant contains various bioactive compounds such as alkaloids, flavonoids, glycosides, steroids, and tannins. The most notable compound is alkaloid tribulosin.

Therapeutic uses:

In traditional medicine systems like Ayurveda, used for various therapeutic purposes. It is believed to have diuretic, aphrodisiac, anti-inflammatory, and hepatoprotective properties. It's commonly used to treat conditions like urinary disorders, sexual dysfunction, jaundice, and inflammation. Additionally, it's also used as a general tonic to improve overall health and vitality.



Fig trees or figs

Ficus sp.

Morphology

Macromorphological characters show leaf arrangement to be alternate in all the species. The leaf apexes are acute, obtuse and Acuminate, with leaf base been cordate and obtuse, having a leaf margin of serrate, entire and scalloped, with the shapes of the leaf cordate, ovate and elliptic.

Chemical Composition

phenolic compounds, flavonoids, anthocyanins, organic acids, carotenoids, steroids, triterpenes, fatty acids, sugars

Therapeutic Uses

diabetes, liver disorders, diarrhea, inflammatory conditions, hemorrhoids, respiratory, and urinary diseases



Lunuwarana (ලුණුවරන)

Crateva adansonii

Common name Garlic pear tree, Caper tree, Three-leaf caper, Obtuse Leaf Crateva

Morphology

tall, glabrous. Leaves petiolate; leaflets shortly petiolulate, elliptic or elliptic-lanceolate, 3–12.5 cm. long, 1–4.8 cm. wide, acuminate at the apex, cuneate at the base and somewhat decurrent into the petiolule, slightly unequal sided; petiole 2.5–8.5 cm

Chemical Composition

the wood showed high ash content (2.7%), high pentosans (25%), relatively medium lignin content (23.9%).

Therapeutic uses

treat constipation, asthma, snakebites, postmenopausal complaints and cancers.



Ceylon Oak (කෝඡ)

Schleichera oleosa

Family -Sapindaceae

Morphology -

This tree is noted for its growth of new leaves that are bright red. In India the growth of these bright red leaves happens around March. Young leaves blooming in various shades of red The leaves are pinnate, with each leaf having 2-4 leaflets. The tree is host to Kusumi Lac (Kerria lacca), a lac insect which is native to India. Its seeds are the source of Kusum oil. Flowers: The flowers are tiny and hardly noticeable, occurring in short dense yellow clusters. Fruit: The fruit is 2.5 to 3 cm long - roughly the size of a small plum - and ovoid, 1-3 celled, and more or less abruptly tapering to a point, dry indehiscent. Seed: The seed is 1.5 cm long, smooth, brown, and enclosed in a succulent aril which has an acidic taste, and contains 25-38% oil and up to 22% protein. It is irregular or ellipsoidal in shape, slightly compressed, and has a thick brown seed coat on its surface. The moisture in the dried seed should be maintained around 4-6%.

Chemical composition -

bark contains lupeol, lupeol acetate, betulin, betulinic acid, beta-sitosterol, and scopoletin

Therapeutic Uses-

The powdered seeds are applied to wounds and ulcers of cattle to remove maggots. The bark is used as an astringent and against skin inflammations, ulcers, itching, acne and other skin infections. It is generally used as an analgesic, antibiotic and against dysentery.



Wood Apple (खजूर)

Limonia acidissima

Family – RUTACEAE

Morphology

Leaves alternate, compound, imparipinnate, with 4-7 dark green leaflets, rachis winged. Leaflets 1.3-4cm long by 1.3-1.5cm wide, mid rib raised, venation conspicuous. Under surface of leaf light green, veins dark green. Fruits 5-7 cm across, with a woody rind.

Chemical compounds

Phytochemical analysis of *Limonia acidissima* ripe fruits indicates presence of flavonoids, steroids, glycosides and various acidic compounds. The major chemical compounds in leaf are acidissimin and acidissiminol.

Therapeutic Uses

The pulp and powdered rind of the fruit is applied as a poultice for insect bites and stings; the unripe fruit is used in the treatment of gum diseases, sore throat, coughs, dysentery and diarrhoea. The powdered fruit is mixed with honey and used to treat dysentery in children.



Hibiscus lobatus (Murray) Kuntze

Family: Malvaceae

Other name: Lobed Leaf Mallow

Morphology:

typically has lobed leaves and produces vibrant, trumpet-shaped flowers.

Chemical composition: It contains various compounds, including flavonoids, phenolic acids, and anthocyanins, which contribute to its therapeutic properties.

Therapeutic uses:

It is commonly used in traditional medicine for its potential therapeutic benefits, including its antioxidant, anti-inflammatory, and hepatoprotective properties. It may also be used to support cardiovascular health and aid in digestion.



Vanda Orchid

Vanda tessellata

Common name

Checkedred Vanda, Atirasa, भुजंगाक्षी

Morphology

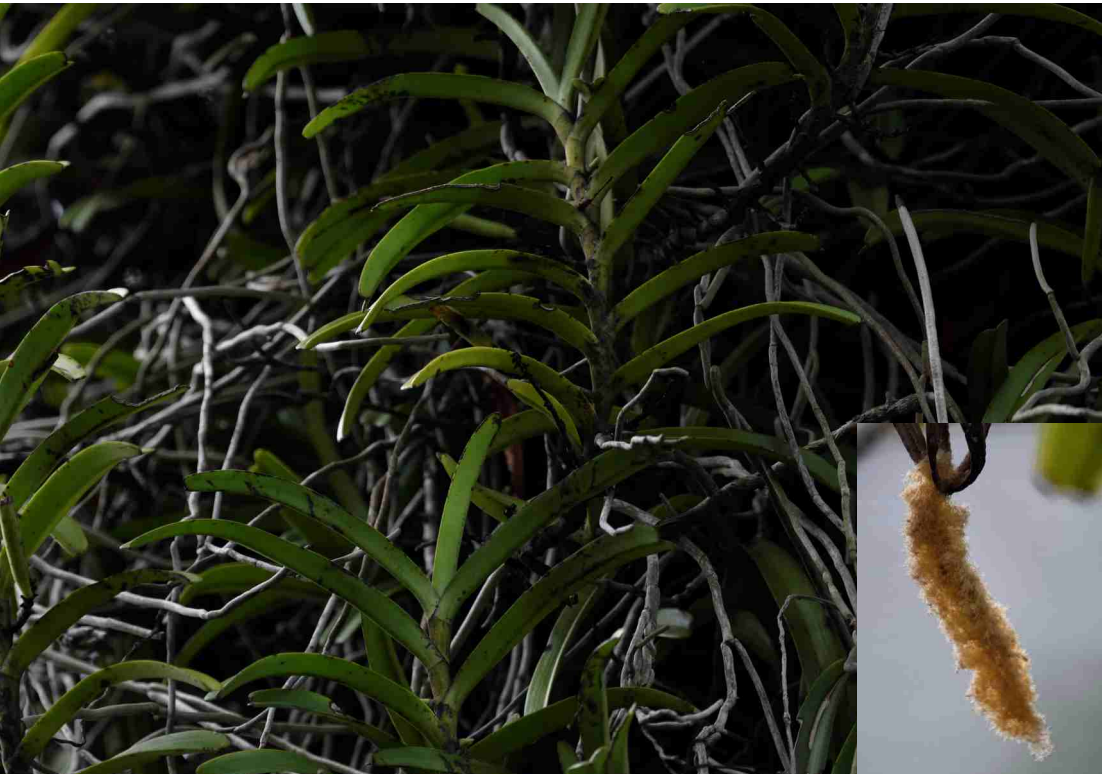
Scandent epiphytic shrubs. Leaves 2-ranked, to 15 x 2.2 cm, oblong, recurved conduplicate, 2-lobed at apex, with a central acute tip, base sheathing, coriaceous, closely packed. Racemes axillary; flowers 5 cm across, white outside, inner tessellate with brown spots; petals to 5 cm; lip bluish dotted with purple, 3-lobed, side lobes 7 mm; spur 5 mm, conical; column 5 mm

Chemical Composition

The plant produces an alkaloid, a glucoside, tannins, β -sitosterol, γ -sitosterol and a long chain aliphatic compound, fatty oils, resins and colouring matters

Therapeutic uses

The roots are alexiteric and antipyretic; useful in dyspepsia, bronchitis, inflammations, piles and hiccup. Externally the root is used in rheumatism and allied disorders and diseases of the nervous system. It is also employed as a remedy for secondary syphilis and scorpion stings



Shingled Silverweed

Argyreia osyrensis

Family: Convolvulaceae

Other name: Argyreia aggregata, Argyreia imbricata, Argyreia brachypoda

Morphology -

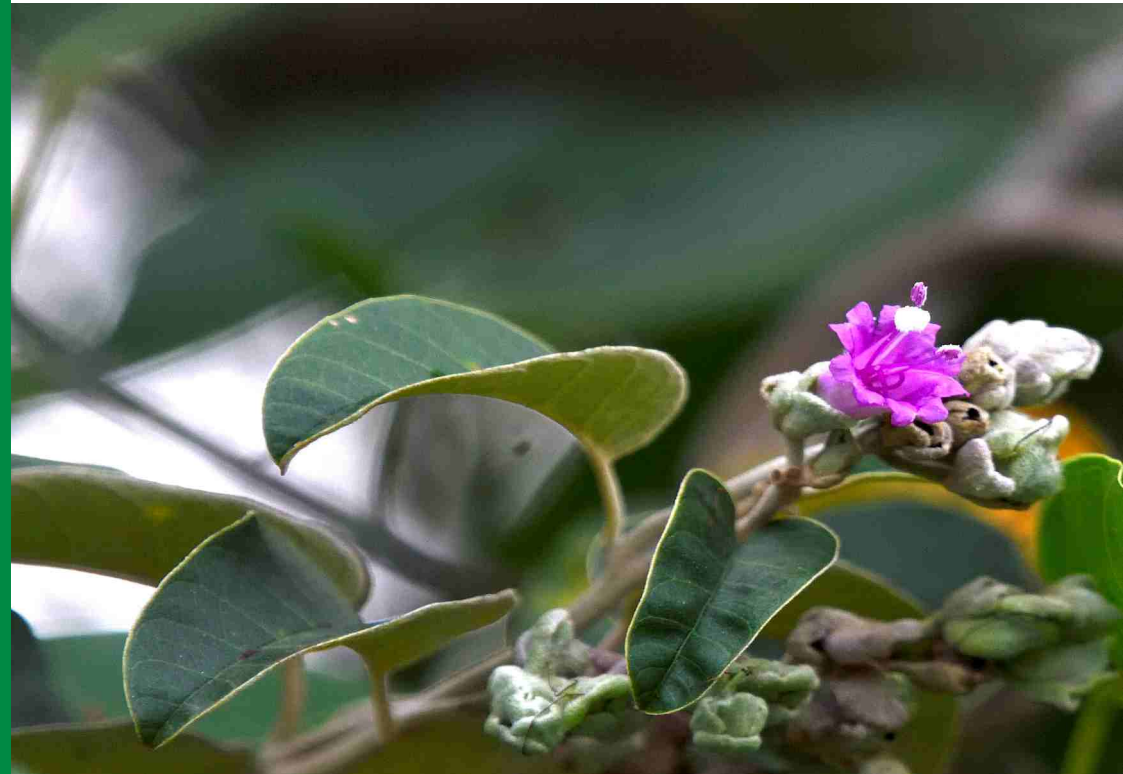
Shingled Silverweed is a climbing shrub with round stems, and axial parts densely whitish, gray, or yellowish velvety. Leaf-stalks are 2-5 cm long. Leaves are ovate or broadly ovate to nearly circular, 4-12 X 4-10 cm, densely gray velvety, woolly, or hairy below, and hairy or somewhat hairless above. Base is heart-shaped, tip pointed or blunt, lateral veins 7-11 pairs. Flowers are borne in head-like clusters, carried on 2.5-6 cm long stalks. Bracts are persistent, broadly obovate, spoon-shaped, or circular, 0.8-1.2 cm, velvety below, tip blunt or flat. Flowers are stalkless or almost so. Sepals are unequal, velvety below, outer 2 obovate or spoon-shaped, 0.9-1 cm, tip blunt, inner 3 oblong, 5.5-8 mm, apex obtuse, hairless above. Fruiting sepals are enlarged, red, concave. Flowers are pink, tubular-bell-shaped, 1.2-1.5 cm.

Chemical composition -

antibacterial and antioxidant properties of different solvent extracts of Argyreia osyrensis Roth. the presence of alkaloids, sterols, saponins, triterpenoids, flavonoids, tannins, carbohydrates, resins and glycosides.

Therapeutic Uses-

In the traditional medicinal system, A. nervosa is mainly used to treat sexual disorders, skin disorders, nootropics, ulcers, gonorrhoea, diabetes, etc. In addition, the seeds of this plant are hallucinogenic. The therapeutic properties of this plant include antioxidant, immunomodulatory, anti-inflammatory, analgesic, hepatoprotective and aphrodisiac.



Aniththa (අනිත්ත)

Rhinacanthus nasutus (L.) Kurz

Family: Acanthaceae

Other name: Snake Jasmine, Snake Jasmine

Morphology:

It's a perennial herb with distinctive elongated leaves and tubular white flowers.

Chemical Composition:

Various compounds have been isolated from *Rhinacanthus nasutus*, including flavonoids, alkaloids, and triterpenoids. These compounds contribute to its medicinal properties.

Therapeutic Uses:

Traditionally, used in traditional medicine for various purposes, including treating skin diseases, promoting wound healing, and exhibiting anti-inflammatory and antioxidant properties. Additionally, it's been studied for its potential anticancer and hepatoprotective effects.

Nelum නෙලුම්

Nelumbo nucifera (*Nelumbium album* Bercht. & Presl)

Family: Nelumbonaceae

Common Name: Sacred Lotus, Indian Lotus, or simply Lotus

Morphological Characteristics:

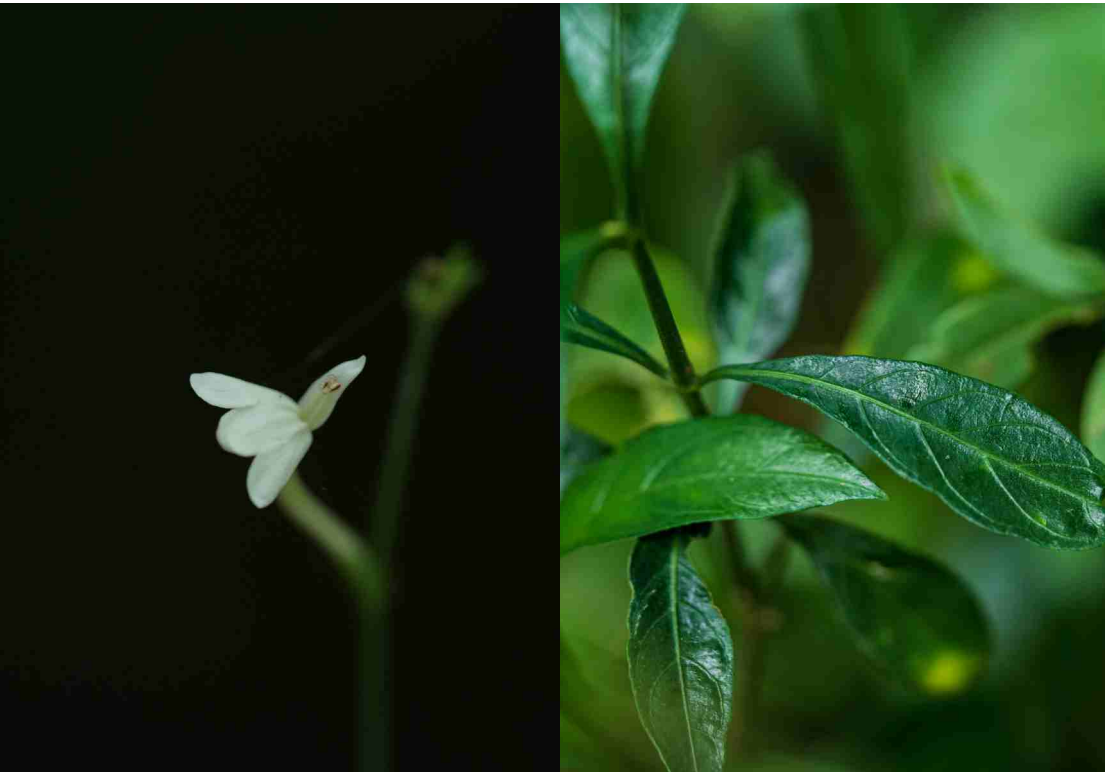
The Sacred Lotus is an aquatic plant with large, round leaves that float on the water's surface. It has beautiful, fragrant flowers that can be white or pink in color. The plant produces distinctive, cone-shaped seed pods that contain the lotus seeds. The roots of the plant are long and tuberous, anchoring the plant in the mud at the bottom of ponds or lakes.

Chemical Compounds:

Alkaloids, flavonoids, tannins, and vitamins. Nuciferine, aporphine, and quercetin.

Therapeutic Uses:

It is believed to have antioxidant, anti-inflammatory, and analgesic properties. The plant is used to treat conditions such as diarrhea, fever, inflammation, and skin disorders.



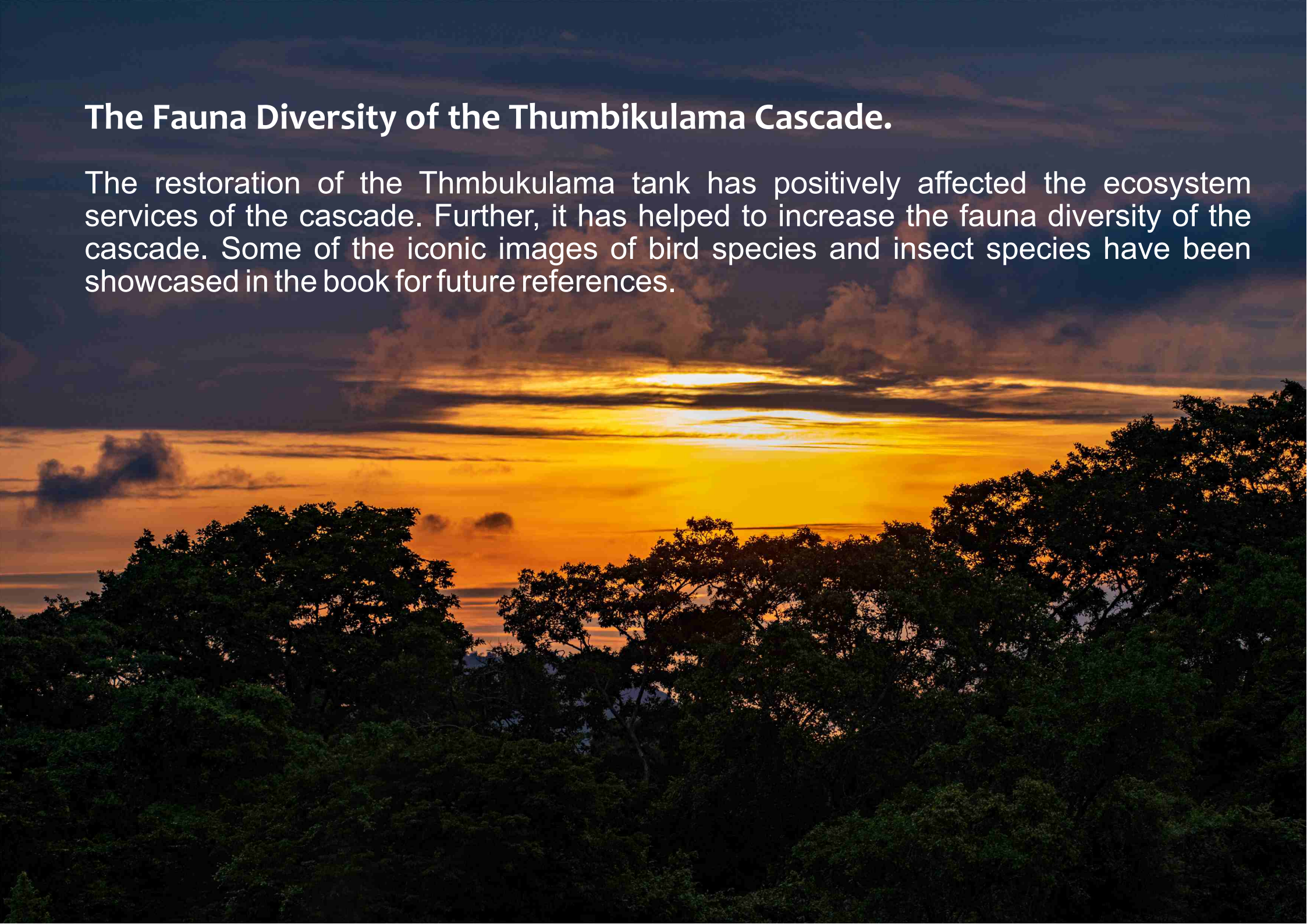


Thumbikulama Tank

The largest tank of the Thumbikulama cascade, which has been reconstructed and restored by the Healthy Landscape Project recently. The command area has been now gazetted under the forest department as a forest reservation. Most of the unique features of a tank are preserved in the tank.

The Fauna Diversity of the Thumbikulama Cascade.

The restoration of the Thmbukulama tank has positively affected the ecosystem services of the cascade. Further, it has helped to increase the fauna diversity of the cascade. Some of the iconic images of bird species and insect species have been showcased in the book for future references.

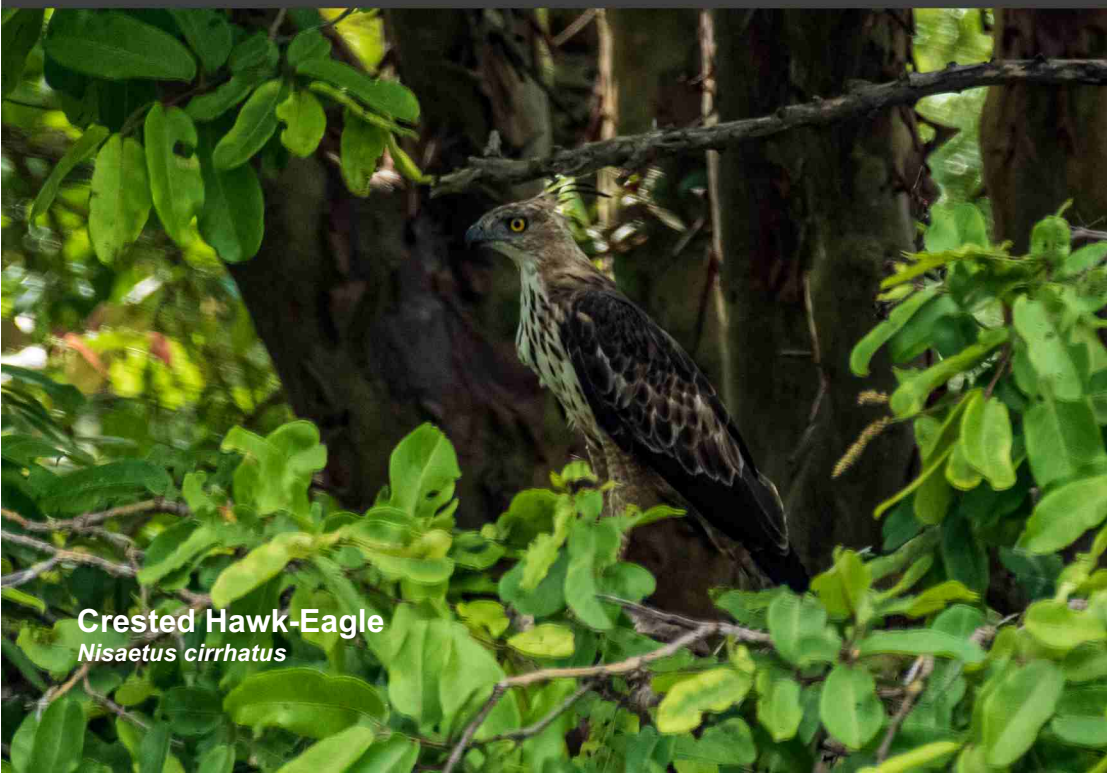




Crested Serpent Eagle
Spilornis cheela



Brahminy Kite
Haliastur indus



Crested Hawk-Eagle
Nisaetus cirrhatus



Grey-headed Fish Eagle
Ichthyophaga ichthyaetus



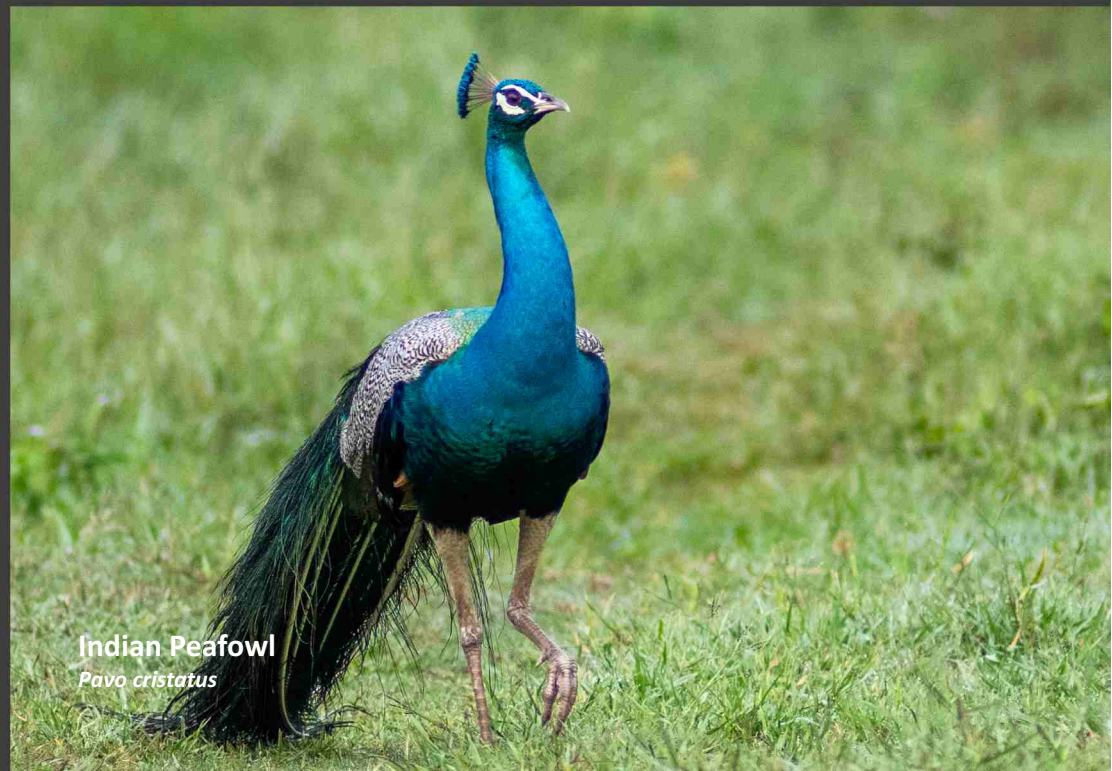
White-throated Kingfisher / White-breasted Kingfisher
Halcyon smyrnensis



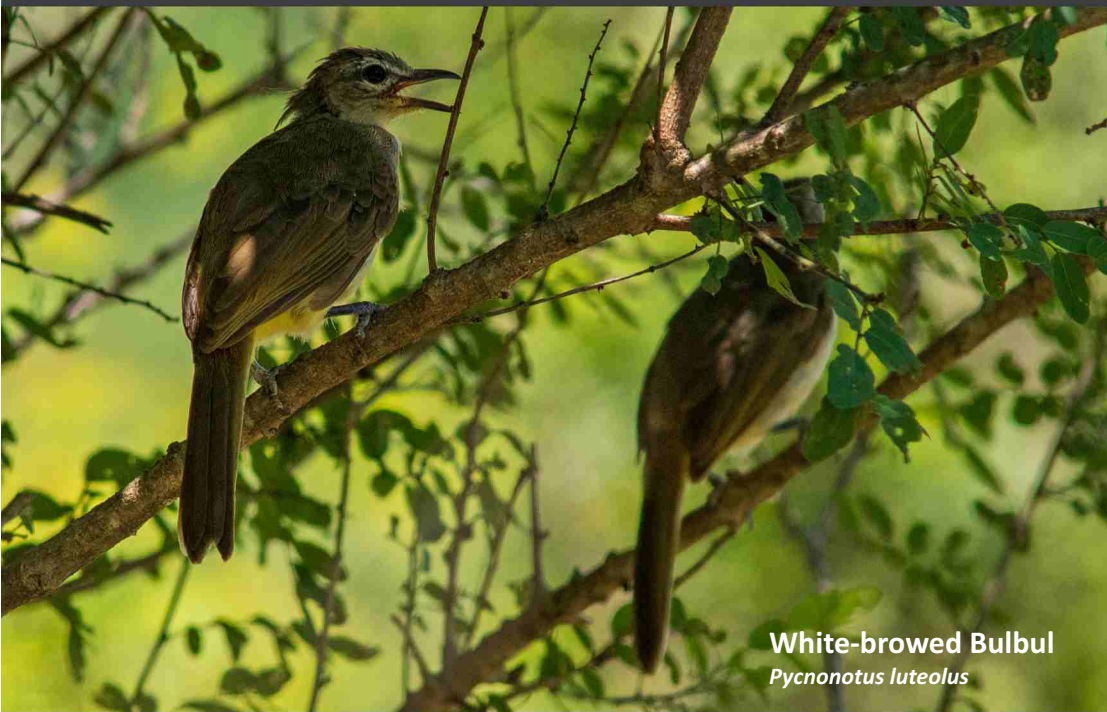
Stork-billed Kingfisher
Pelargopsis capensis



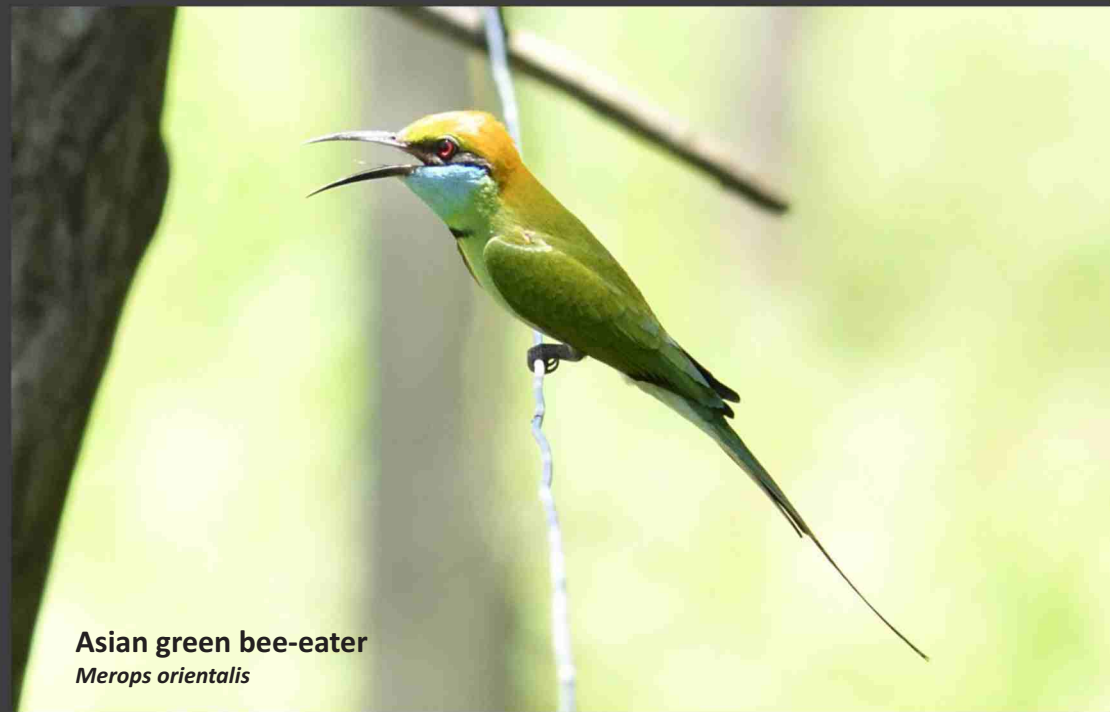
Common Kingfisher
Alcedo atthis



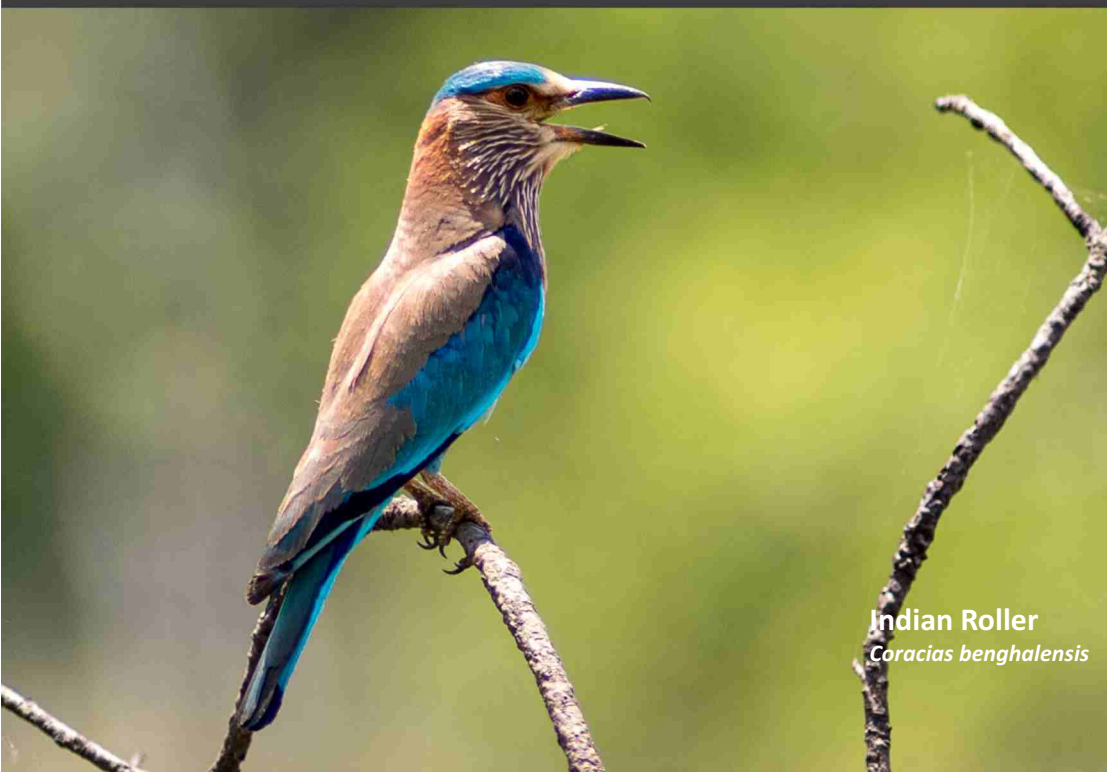
Indian Peafowl
Pavo cristatus



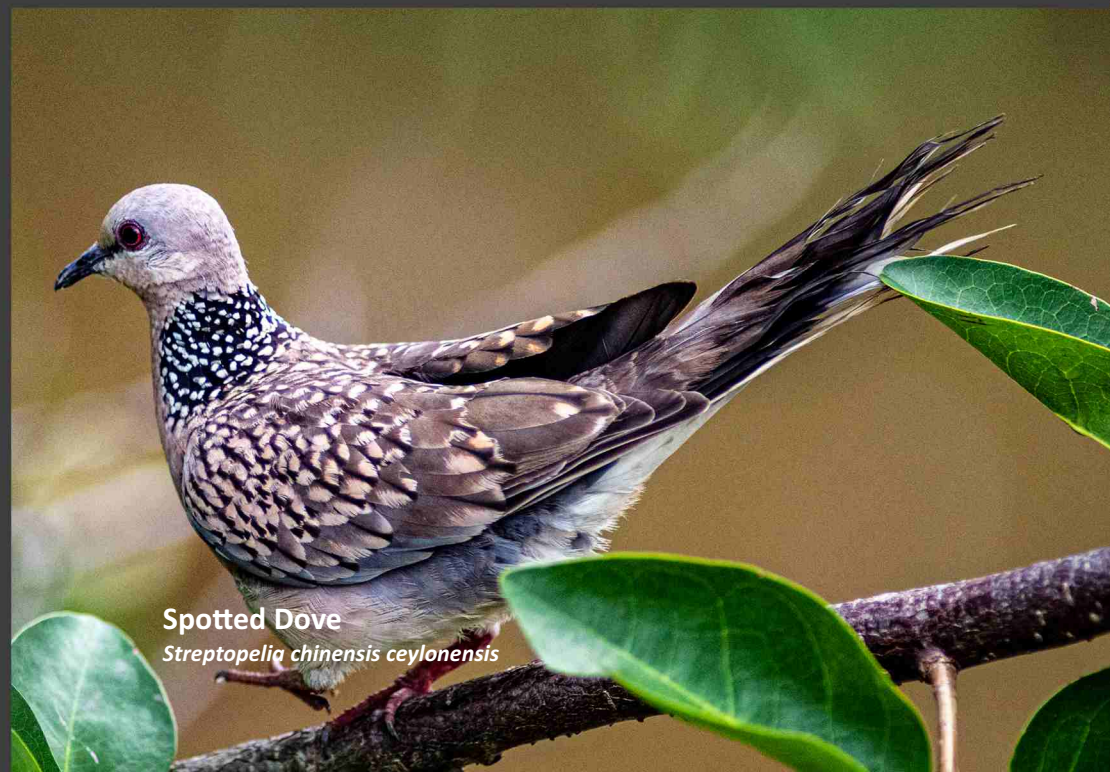
White-browed Bulbul
Pycnonotus luteolus



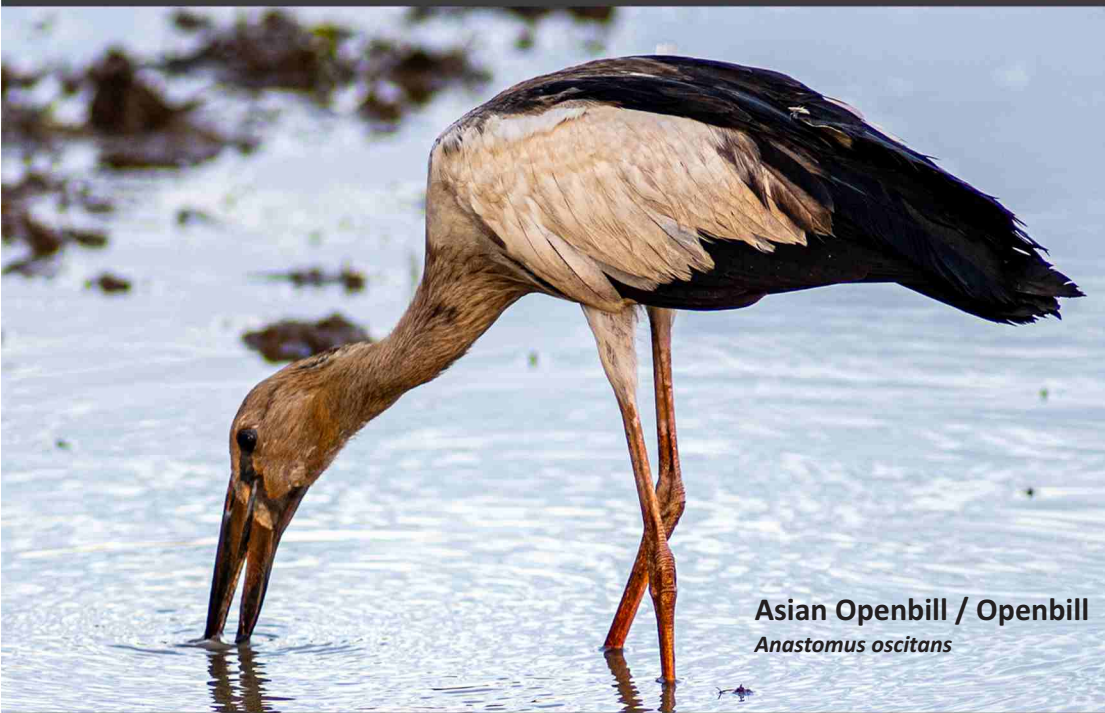
Asian green bee-eater
Merops orientalis



Indian Roller
Coracias benghalensis



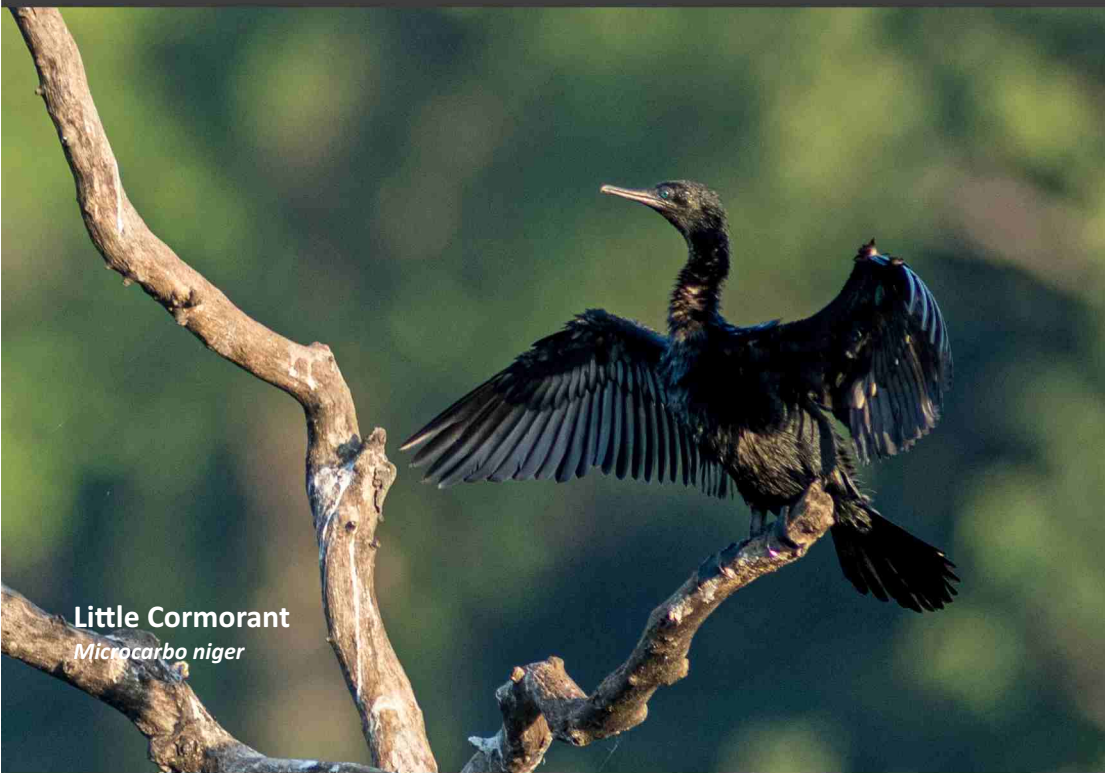
Spotted Dove
Streptopelia chinensis ceylonensis



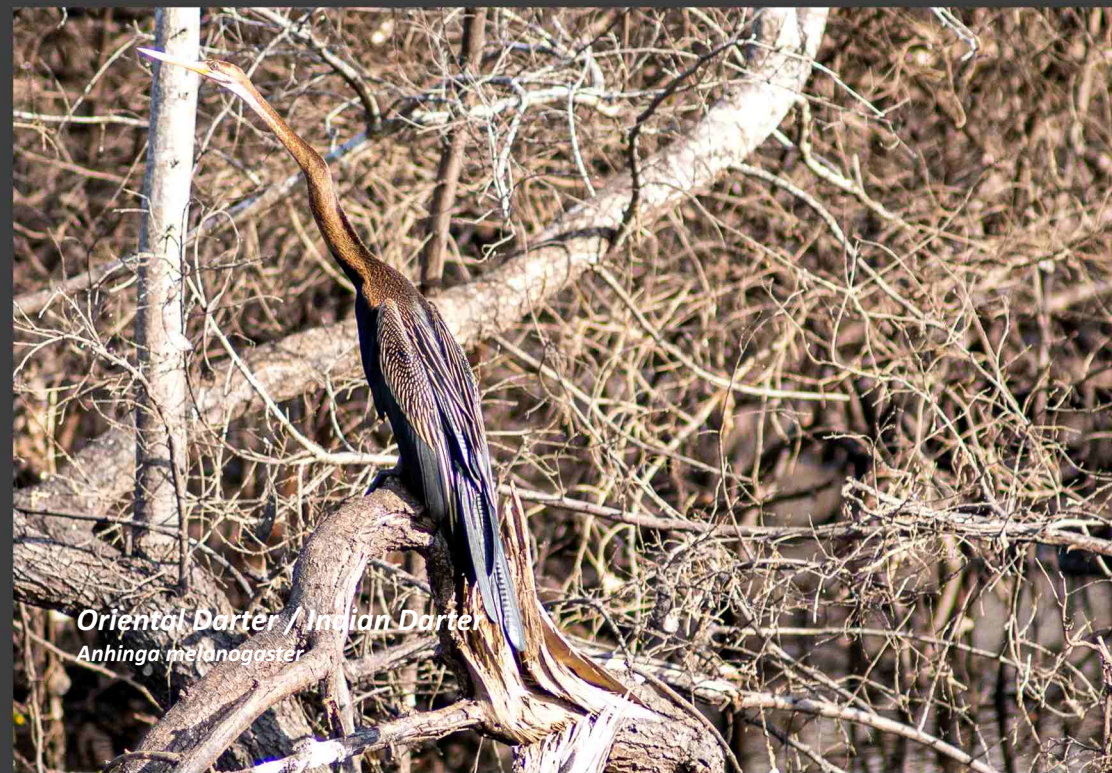
Asian Openbill / Openbill
Anastomus oscitans



Indian Pond Heron
Ardeola grayii



Little Cormorant
Microcarbo niger



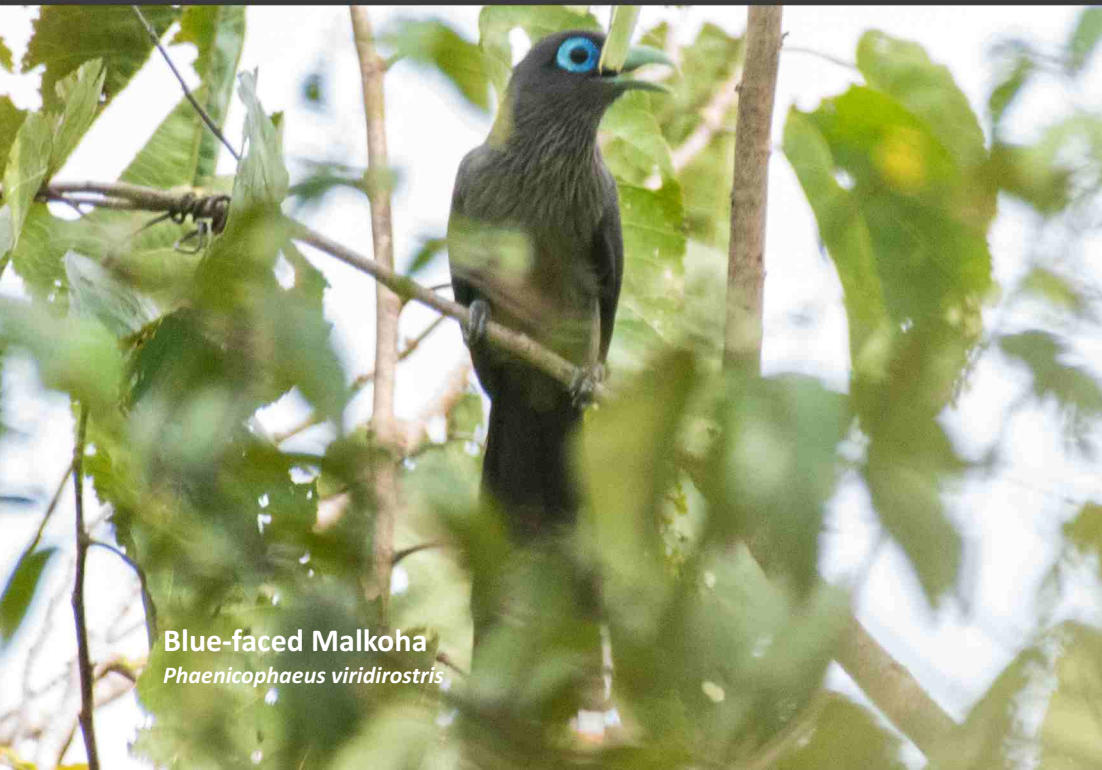
Oriental Darter / Indian Darter
Anhinga melanogaster



Brown Fish-Owl
Ketupa zeylonensis



Black-backed Robin / Black Robin
Copsychus fulicatus



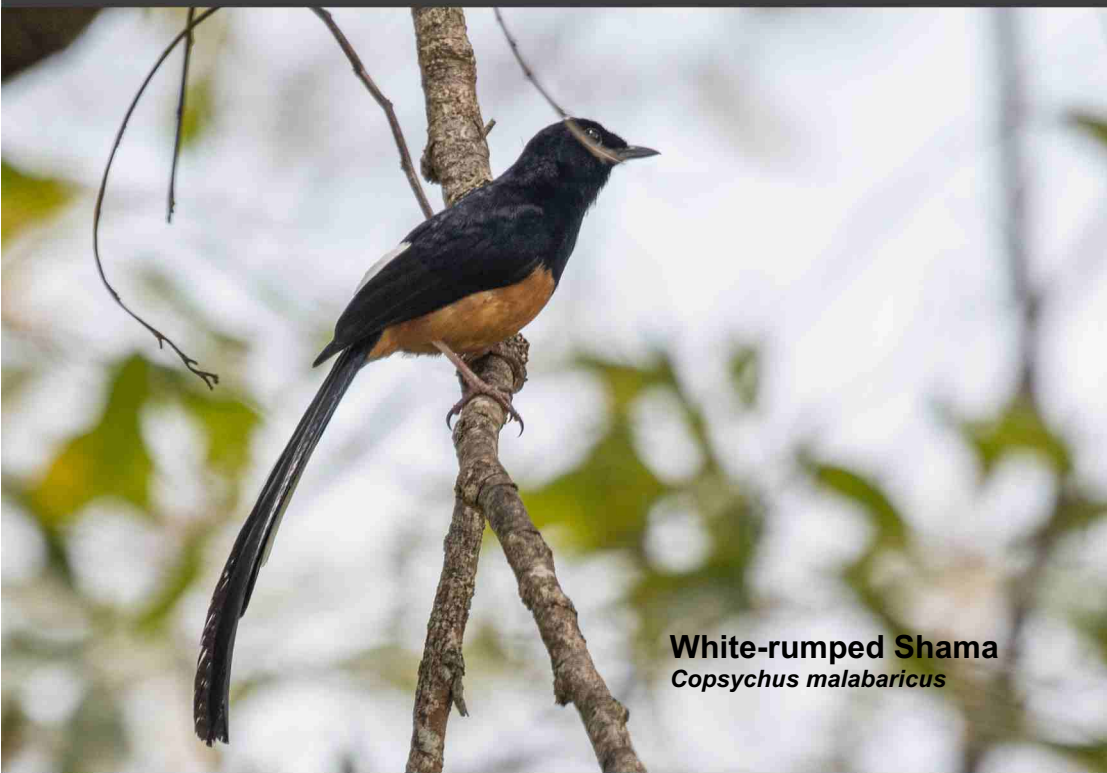
Blue-faced Malkoha
Phaenicophaeus viridirostris



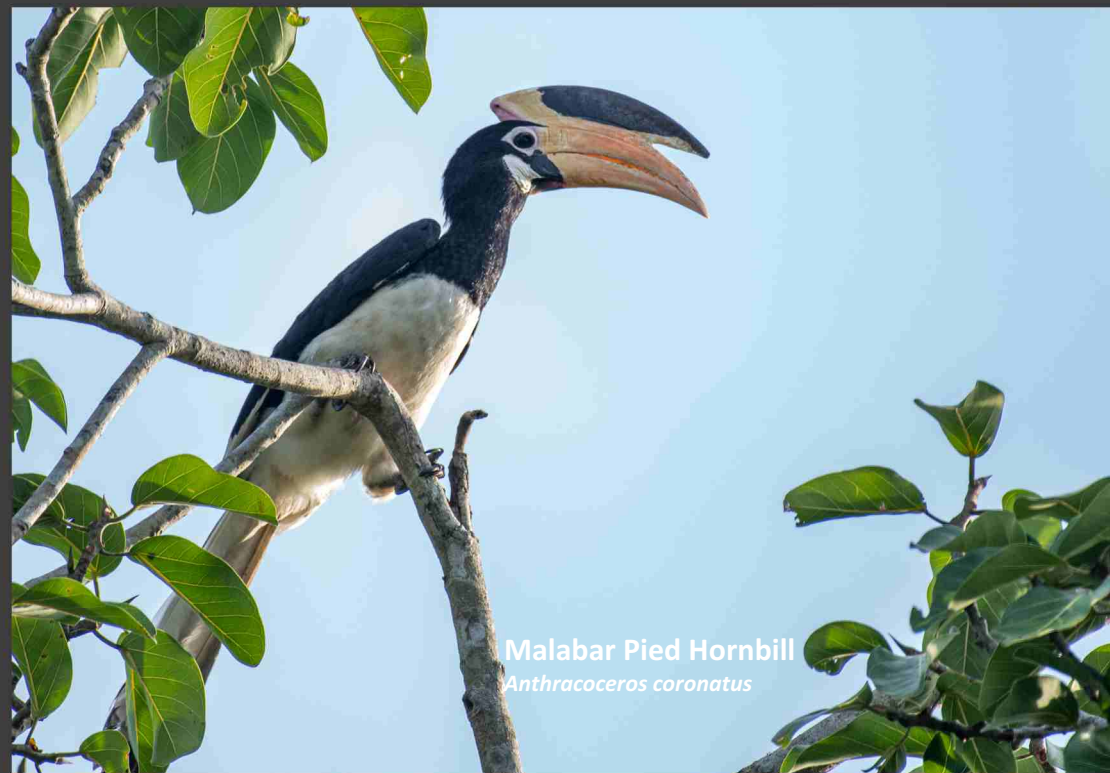
Jerdon's Leafbird / Jerdon's Chloropsis
Chloropsis jerdoni



Tawny-bellied Babbler / White-throated Babbler
Dumetia hyperythra phillipsi



White-rumped Shama
Copsychus malabaricus



Malabar Pied Hornbill
Anthracoceros coronatus



White-rumped Munia
Lonchura striata



Scaly-breasted Munia / Spotted Munia
Lonchura punctulata



Black-headed Munia
Lonchura malacca



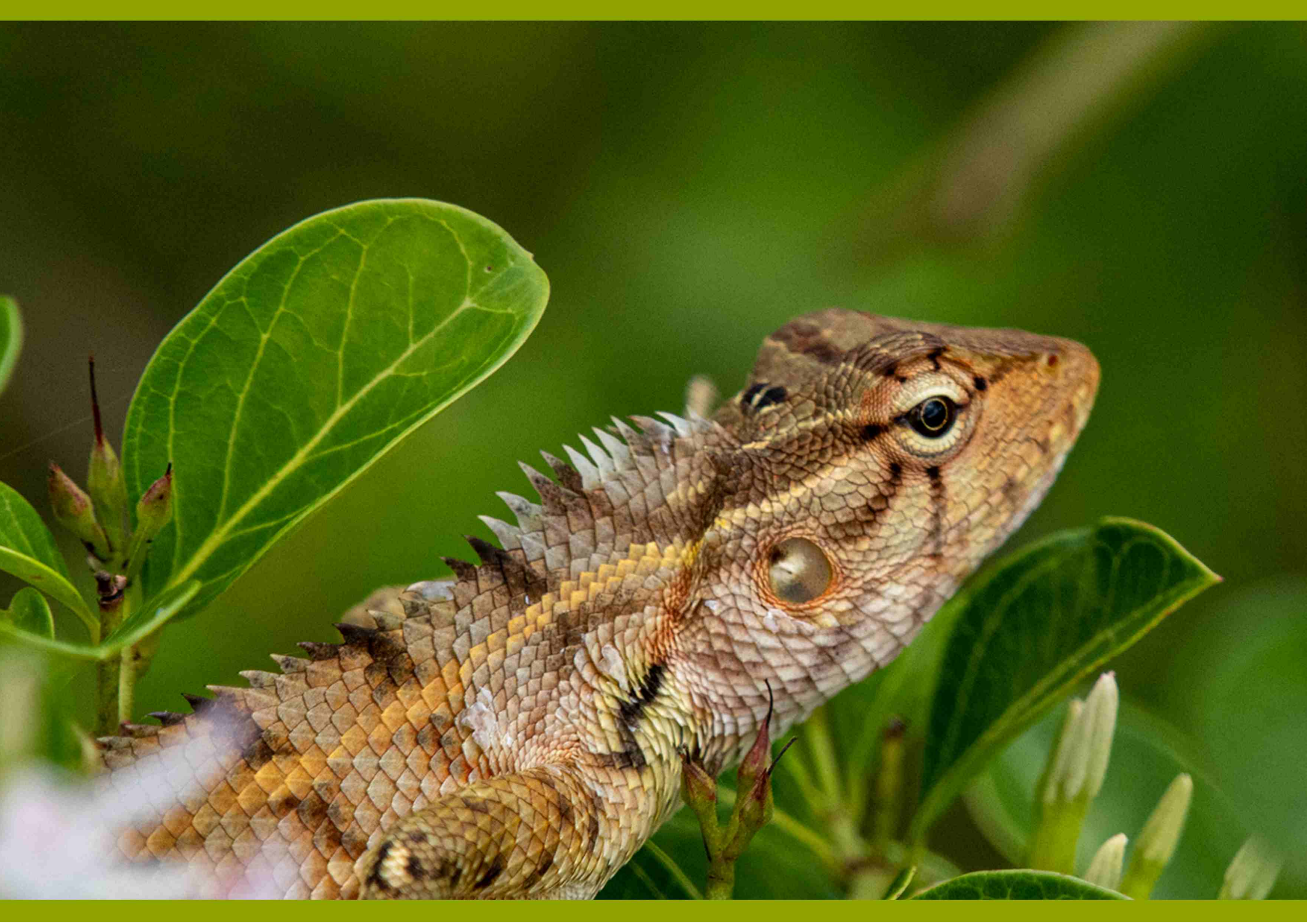
Oriental Honey Buzzard / Crested Honey Buzzard
Pernis ptilorhynchus

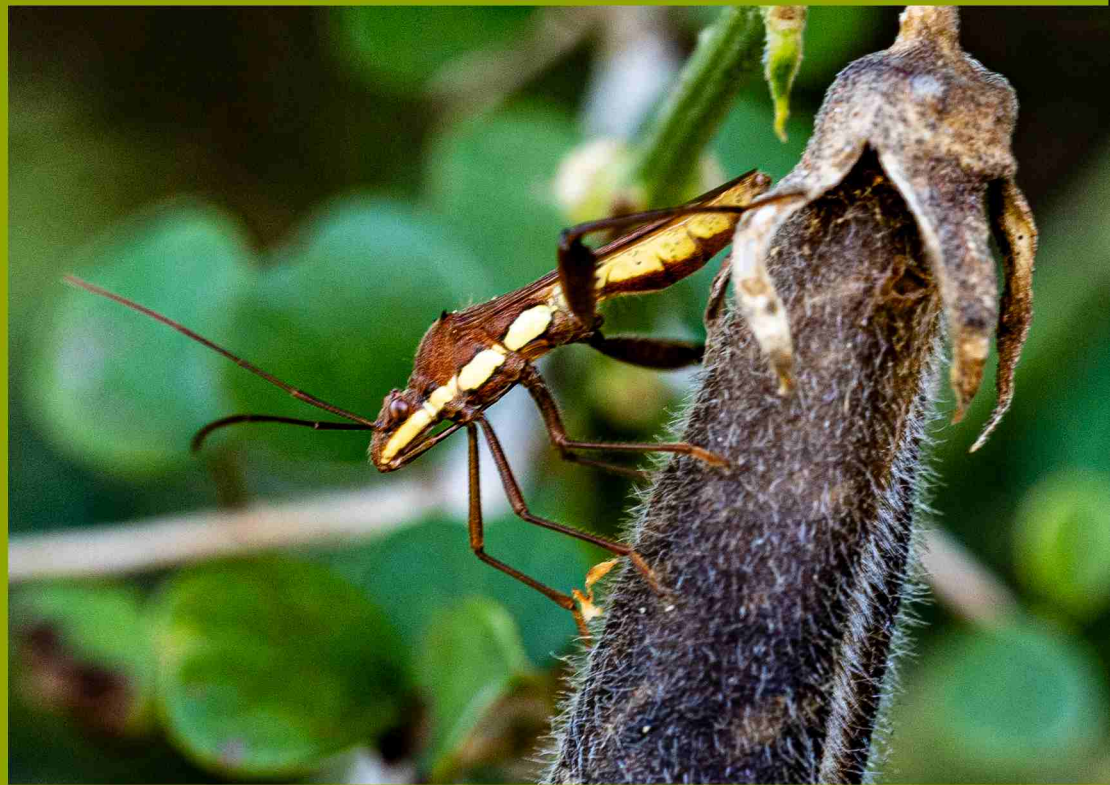
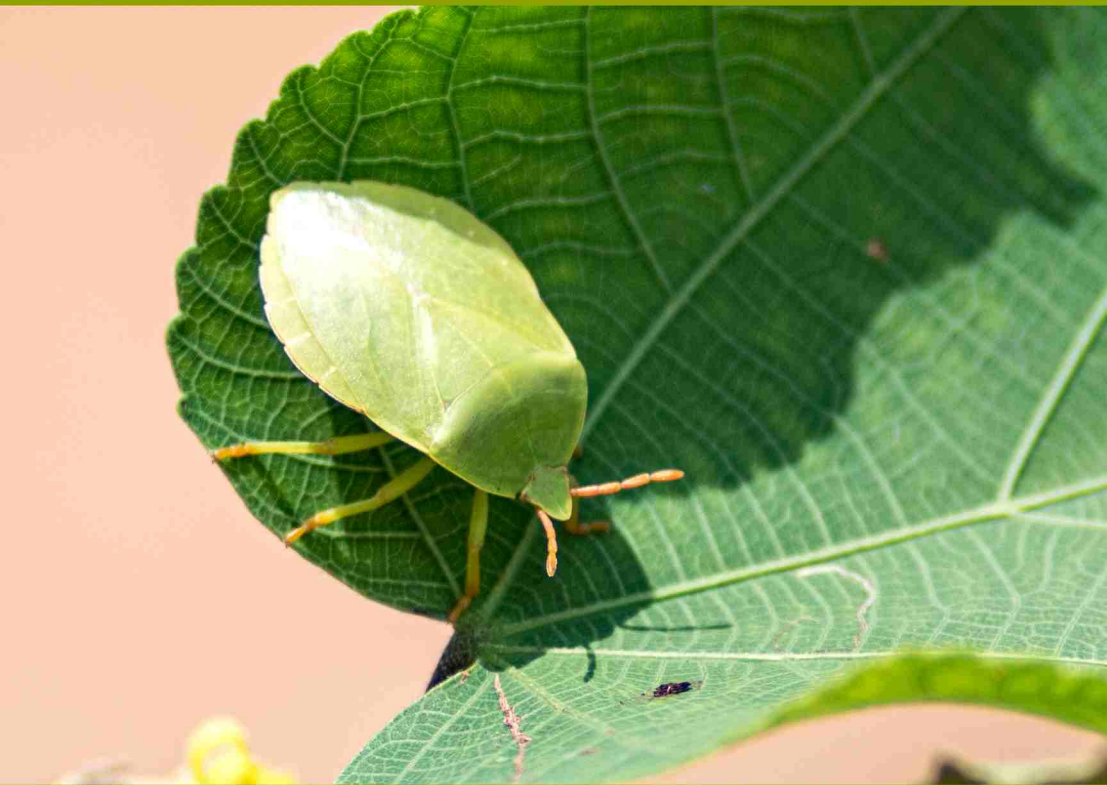


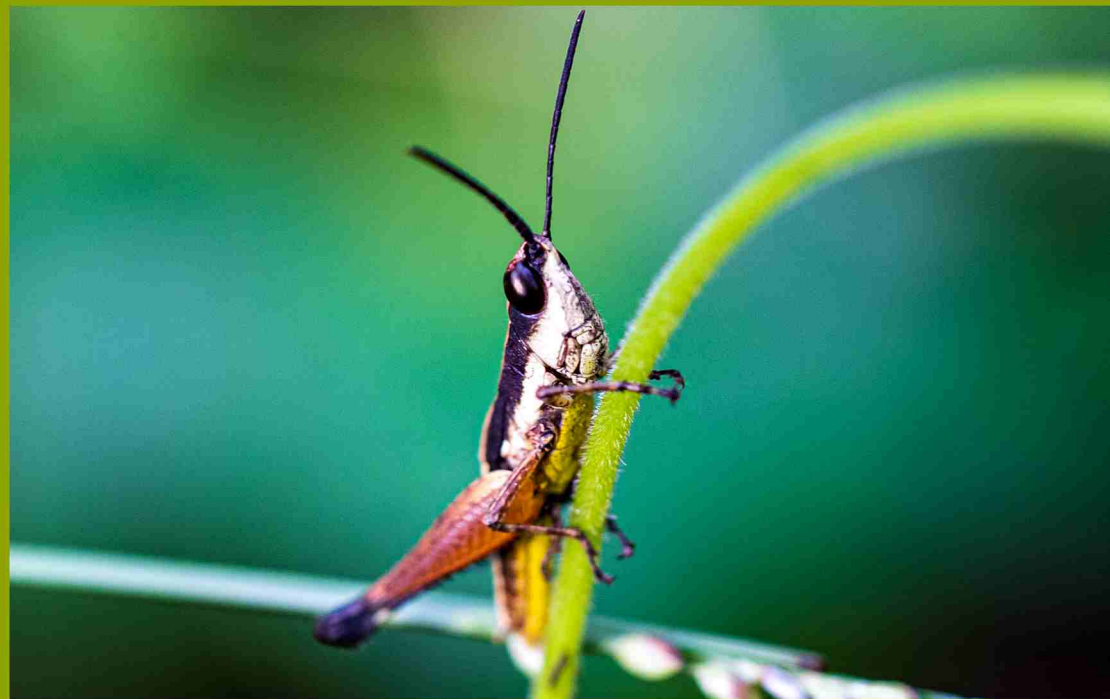
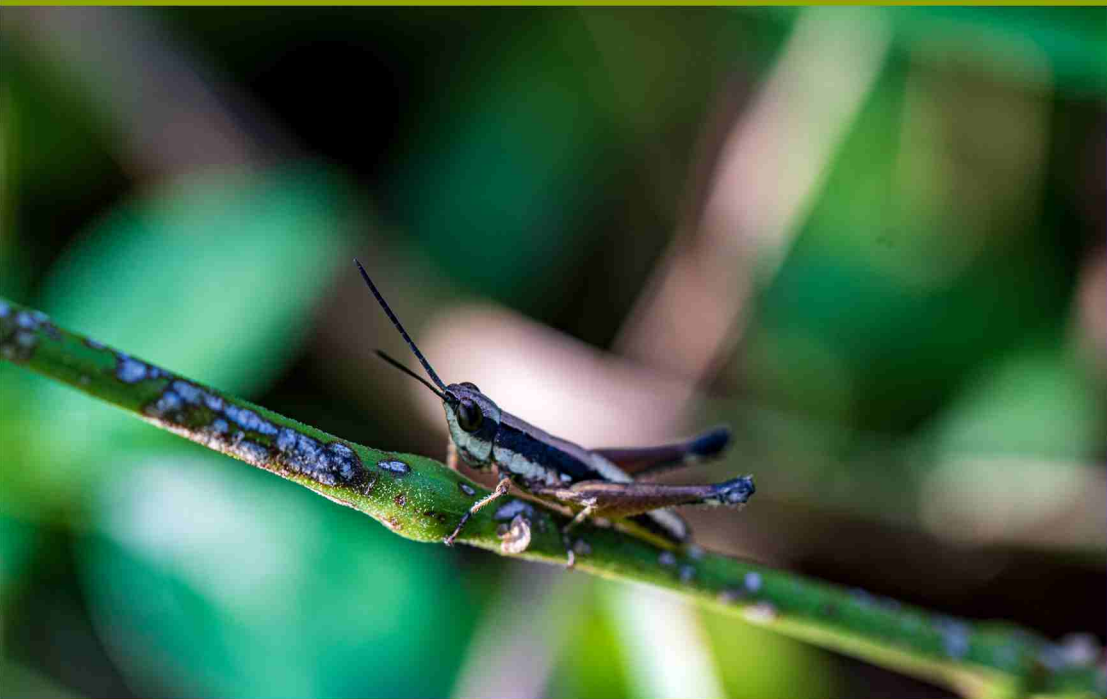


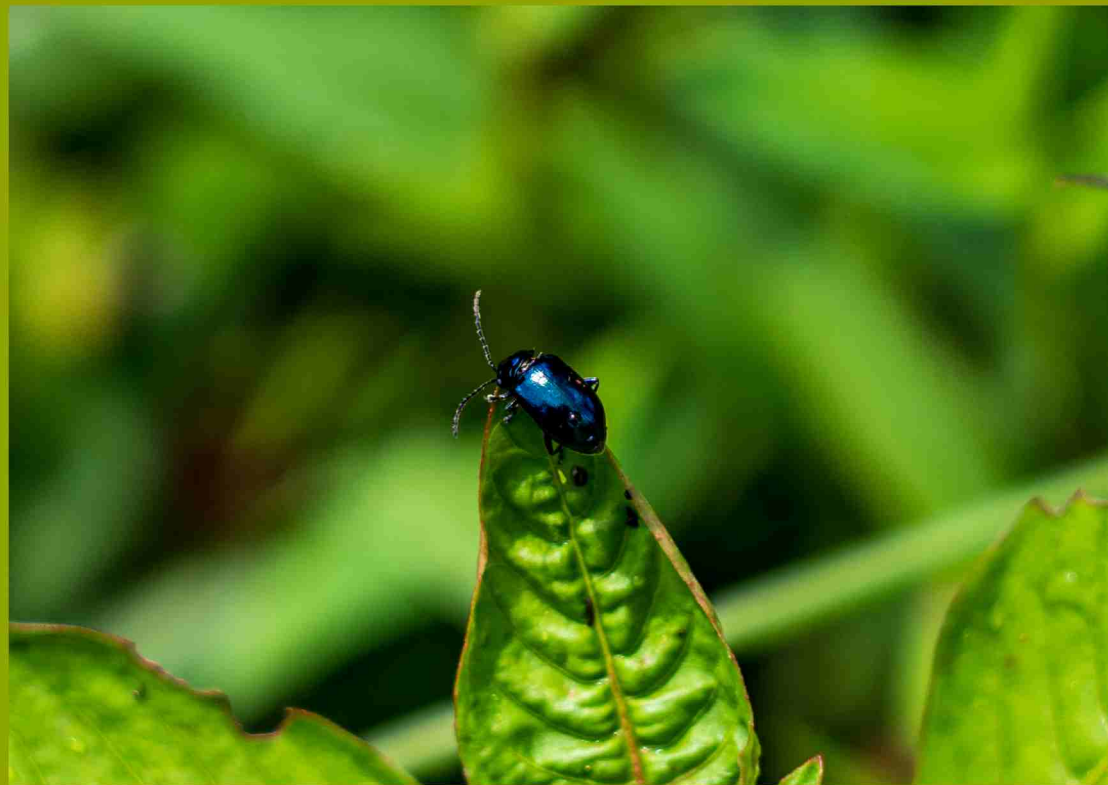
Galkadawala Tank

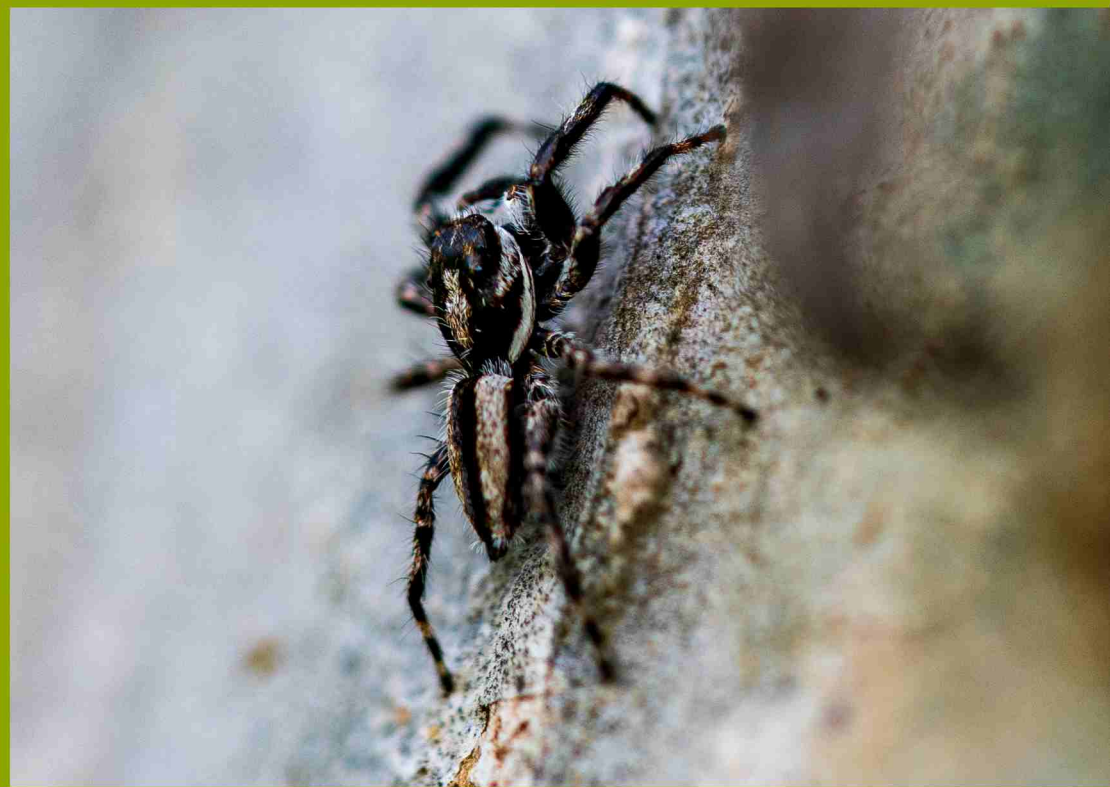
This is the last tank situated in the main axis of the Thumbikulama cascade. The tank provides irrigation for 110- 120 acres. A well-preserved intercept can be observed with much taller trees showing evergreen characteristics. A large forest reservation feeds the tank as its upper catchment. The water from sluice and spill flows to the “Bellan Ala” of the Bellankadawala cascade which takes water from to the Horiwila tank.















Oriental Scarlet
Crocothemis servilla servilla



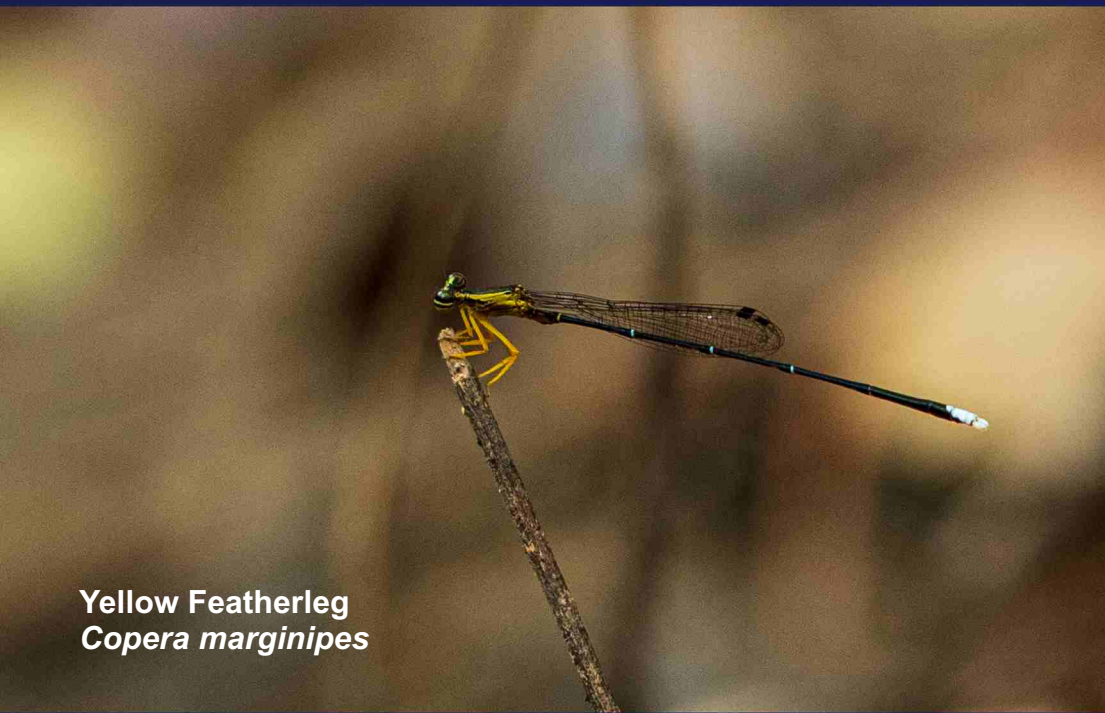
Oriental Scarlet
Crocothemis servilla servilla



Variegated Flutterer
Rhyothemis variegata variegata



Asian Groundling
Brachythemis contaminata



Yellow Featherleg
Copera marginipes



Yellow Featherleg
Copera marginipes



Pied parasol
Neurothemis tullia tullia



Rapacious Flangetail
Lctinogomphus rapax



Scarlet Basker
Urothemis signata



Scarlet Basker
Urothemis signata



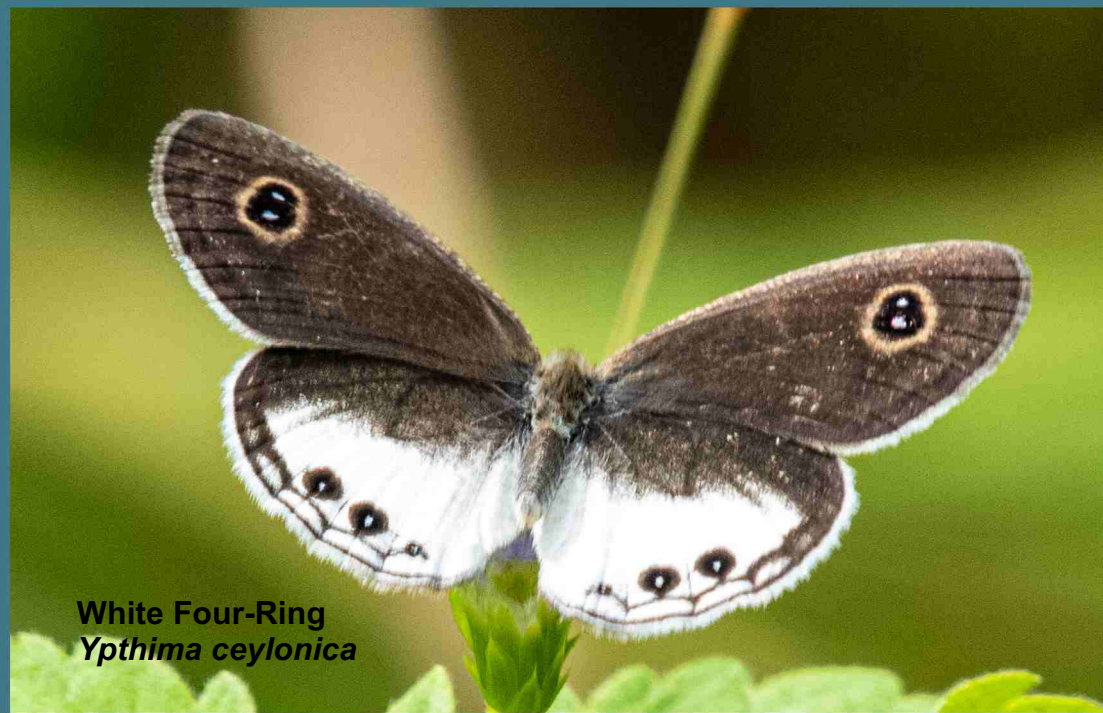
Dancing Dropwing
Trithemis pallidinervis



Blue Percher
Diplacodes trivialis



Mottled Emigrant
Catopsilia pyranthe



White Four-Ring
Ypthima ceylonica



Peacock Pansy
Jumonia almana almana



Common Cerulean
Jamides celeno tissama

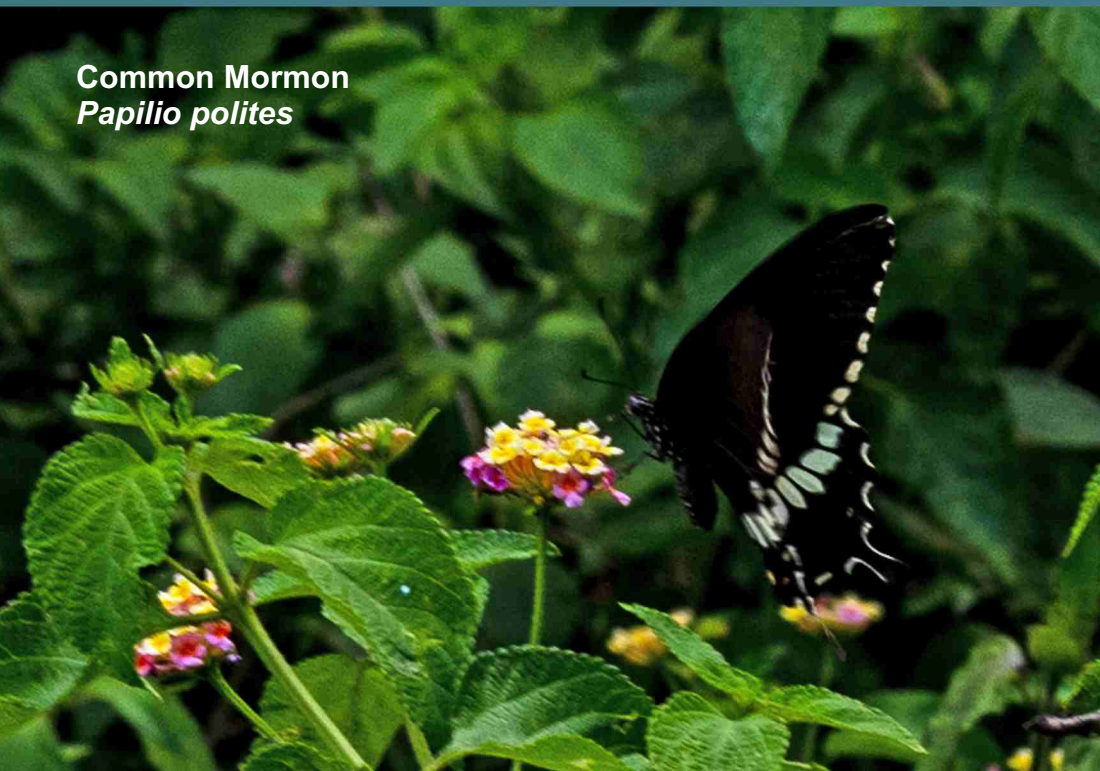
Common crow
Euploea core



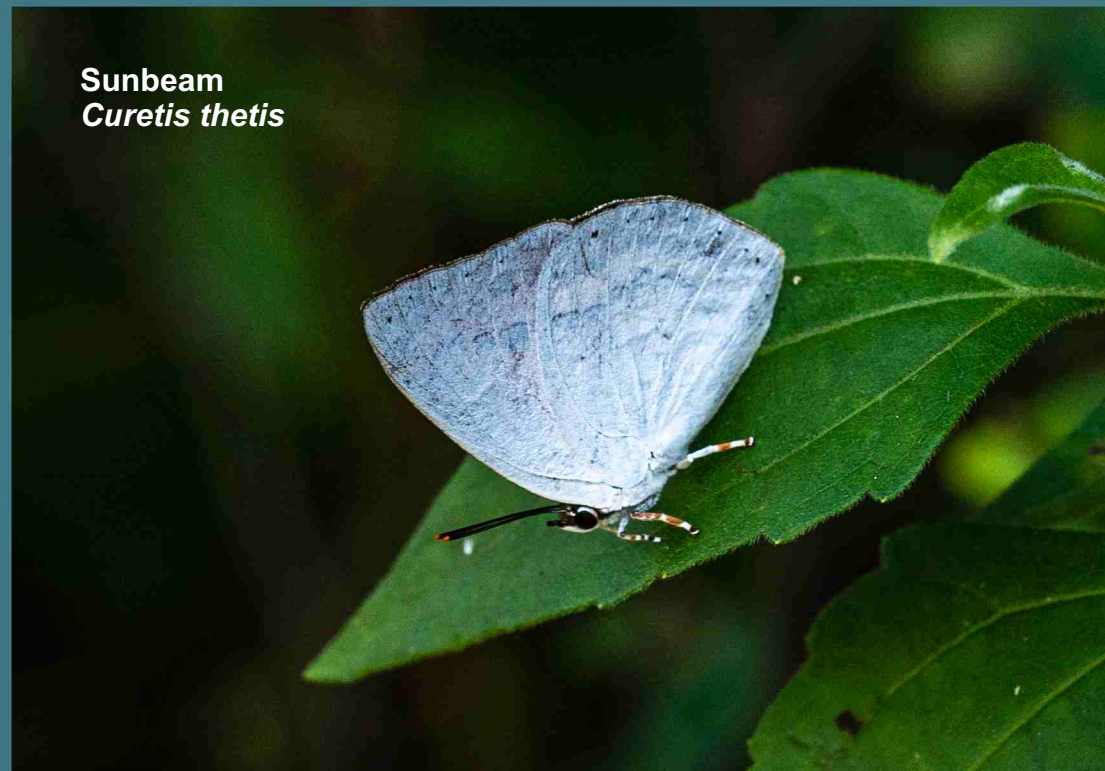
Small salmon Arab
Colotis amata

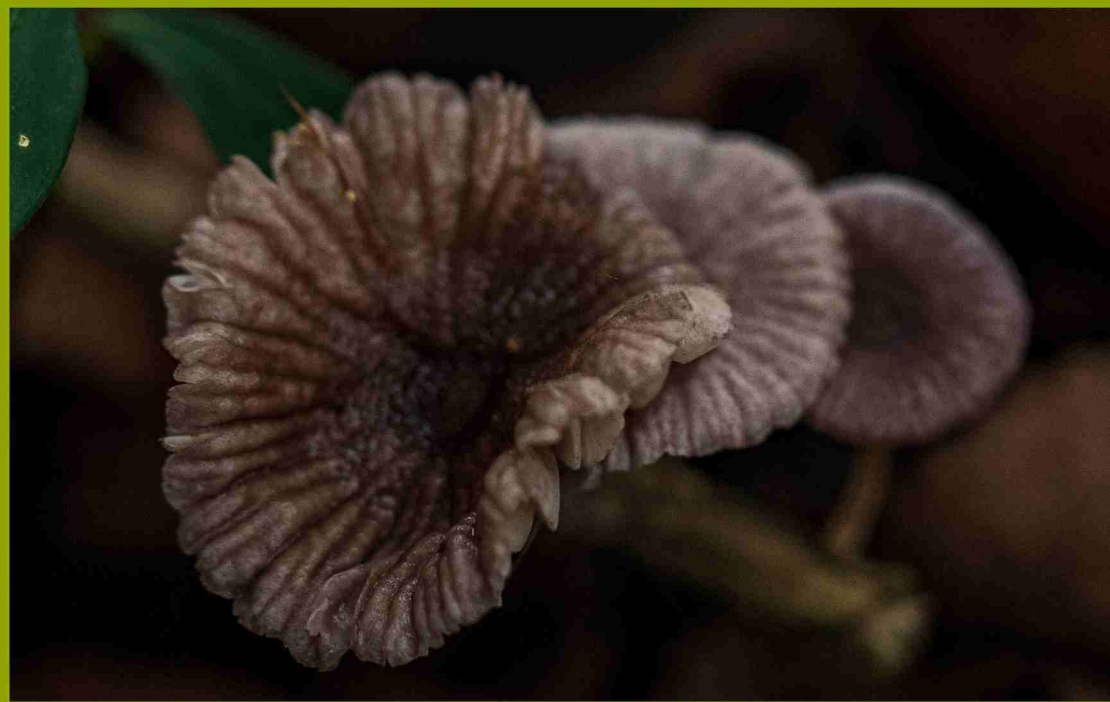
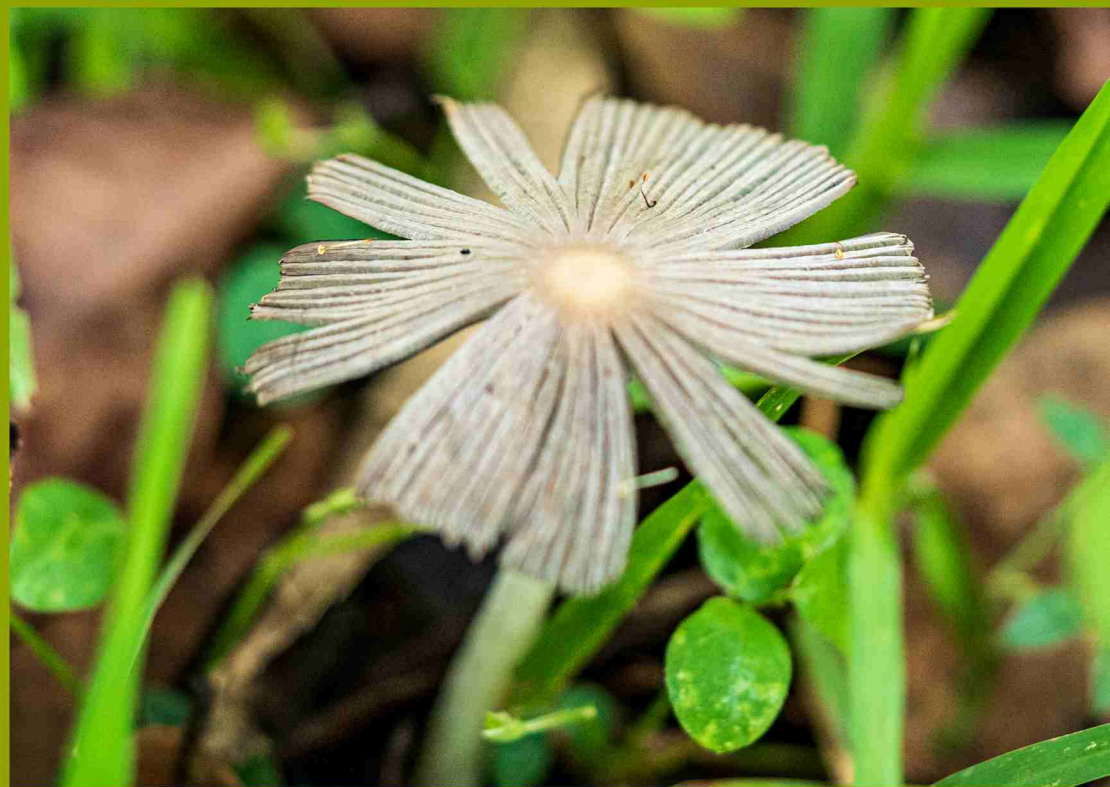


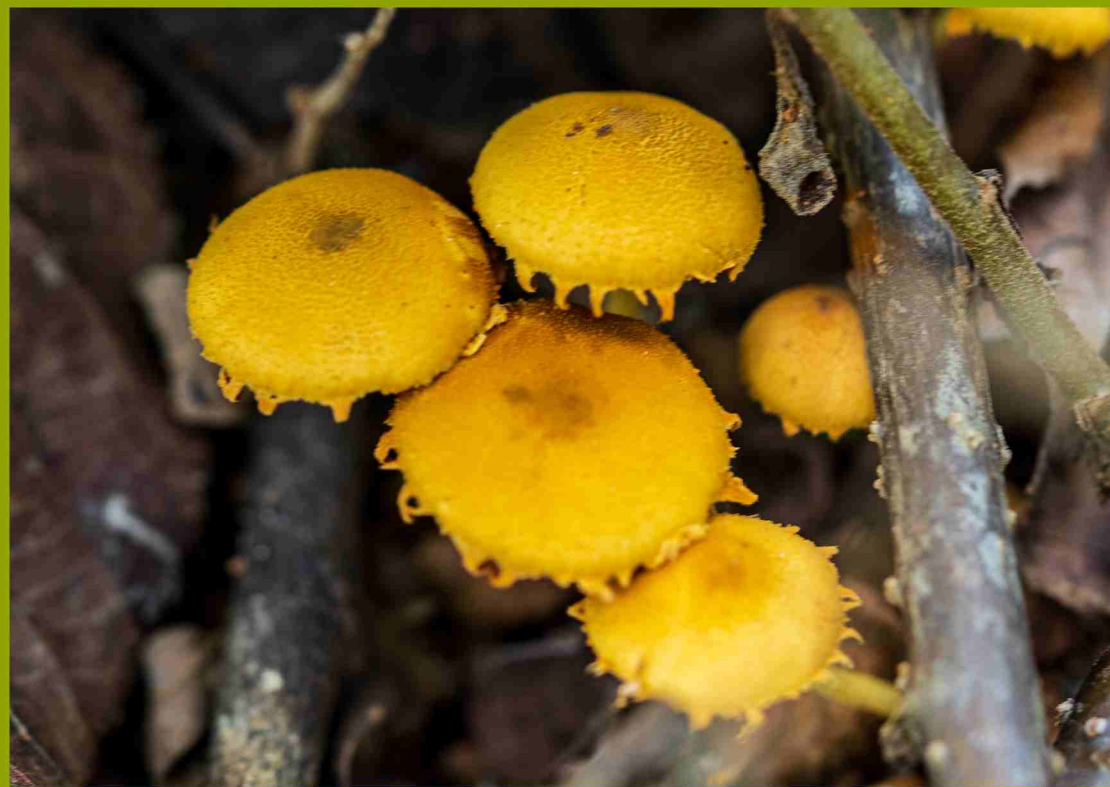
Common Mormon
Papilio polites



Sunbeam
Curetis thetis











Kayan Tank

Another side tank (Elapath Wewa) of the cascade with a small command area of 4 acres. The tank also in small scale with 4-5 acres of spread area. The water from sluice and spill flows to the “Bellan Ala” and flows to the Horiwila tank.

Village life of Cascade

Village life is basically dependent on agriculture including paddy cultivation and vegetable cultivation in “Yala” and “Maha” seasons. Apart from that, fisheries have emerged after restoration of the “Thumbikulama” tank.

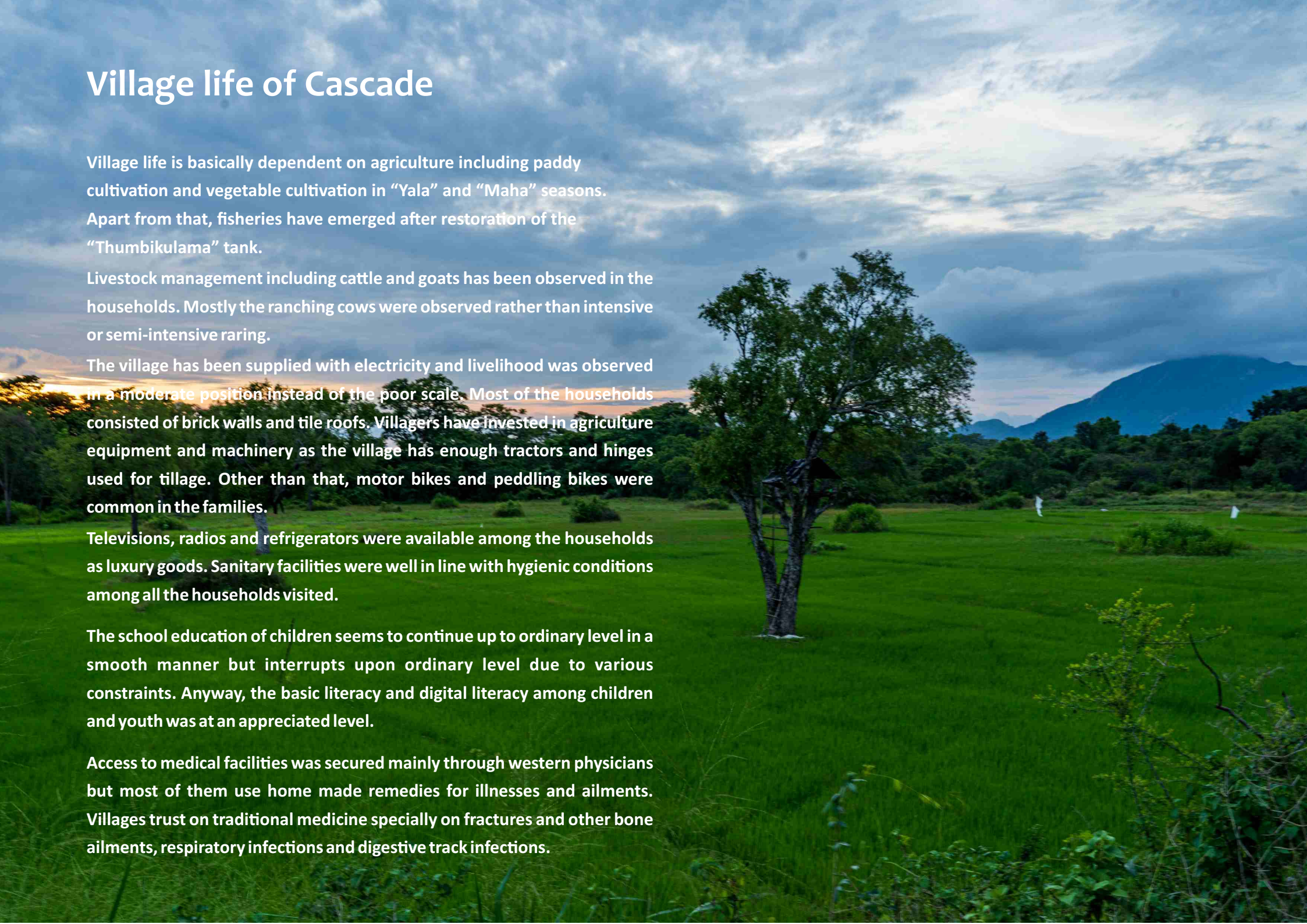
Livestock management including cattle and goats has been observed in the households. Mostly the ranching cows were observed rather than intensive or semi-intensive rearing.

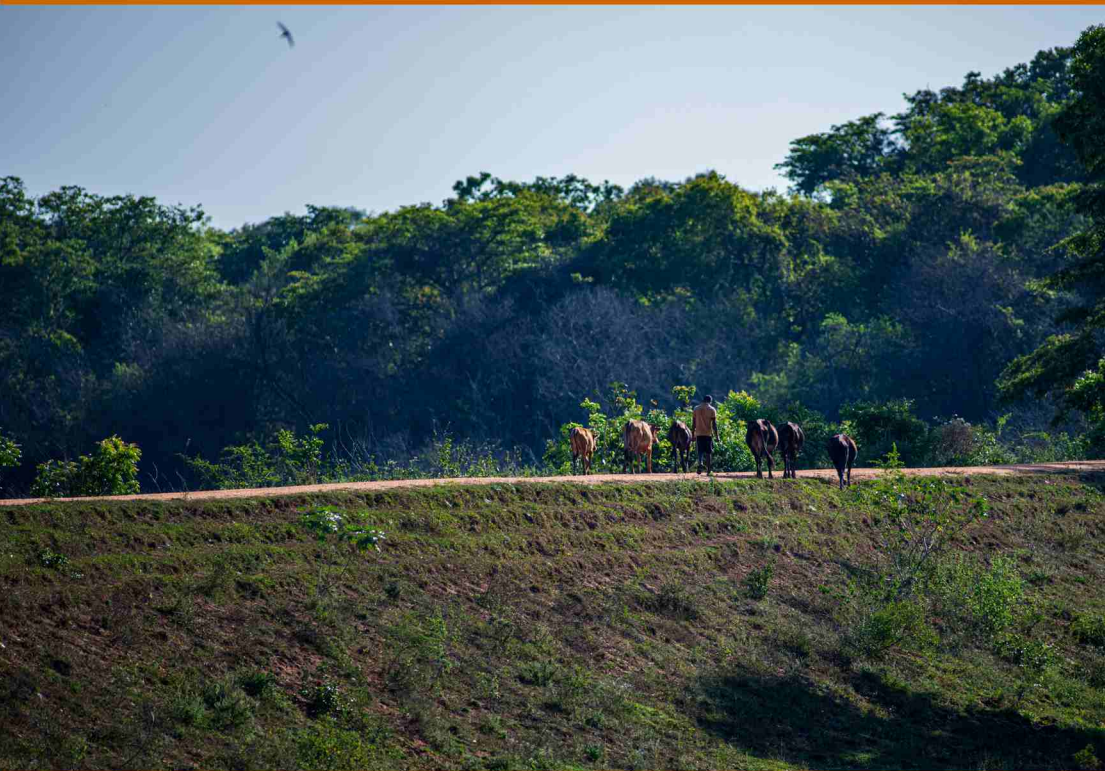
The village has been supplied with electricity and livelihood was observed in a moderate position instead of the poor scale. Most of the households consisted of brick walls and tile roofs. Villagers have invested in agriculture equipment and machinery as the village has enough tractors and hinges used for tillage. Other than that, motor bikes and peddling bikes were common in the families.

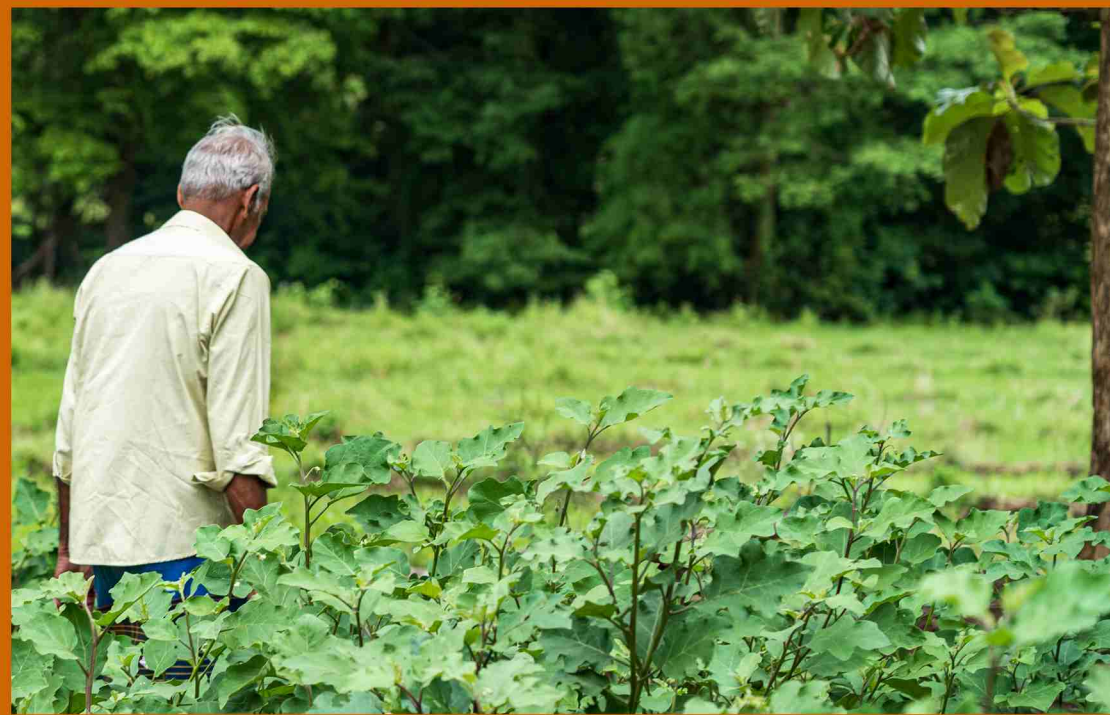
Televisions, radios and refrigerators were available among the households as luxury goods. Sanitary facilities were well in line with hygienic conditions among all the households visited.

The school education of children seems to continue up to ordinary level in a smooth manner but interrupts upon ordinary level due to various constraints. Anyway, the basic literacy and digital literacy among children and youth was at an appreciated level.

Access to medical facilities was secured mainly through western physicians but most of them use home made remedies for illnesses and ailments. Villages trust on traditional medicine specially on fractures and other bone ailments, respiratory infections and digestive track infections.









Pattiya Tank

This is on the slope of the valley angled to the main axis. This is a side tank of the cascade and considered as “Elapath Wewa”. The command area is about 22 acres. The tank exhibits hydrophyte growth on the water surface and bottom. This could be due to accumulation of agriculture inputs from the chena cultivations in upper catchment areas. The water from sluice and spill flows to the “Bellan Ala” which leads to Horiwila tank.





Niwantha Kanuwana

Malalasiri Senevirathne

Madhawa Athukorala