We are IntechOpen, the world’s leading publisher of Open Access books
Built by scientists, for scientists

4,000
Open access books available

116,000
International authors and editors

120M
Downloads

154
Countries delivered to

TOP 1%
Our authors are among the most cited scientists

12.2%
Contributors from top 500 universities

WEB OF SCIENCE™
Selection of our books indexed in the Book Citation Index in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?
Contact book.department@intechopen.com

Numbers displayed above are based on latest data collected.
For more information visit www.intechopen.com
Tropical forests are one of the most diverse (1 ha may contain more than 1000 plant species) and highly productive ecosystems on the earth. They cover 15.0% of the earth’s surface and harbored 80% terrestrial biodiversity. Tropical forests are home to thousands of endemic, rare, endangered, and threatened wildlife species, which play a significant role in ecosystem functions, such as pest control, pollinators, and seed dispersal. Wildlife species are bioindicators of the tropical forest ecosystems, that is, their presence or absence may provide the information about the habitat dynamics, such as vegetation structure, food resources, productivity, and anthropogenic disturbances. Despite being rich in wildlife resources, tropical forests have been extensively lost and degraded by human intervention, and their destruction is still continuous in a variety of ways. The current information on the tropical forests as an ideal habitat for a wide array of wildlife species is inadequate. It is highly essential to examine with solid grasp the suitability of the tropical forest as attractive habitat for diversity of wildlife species to understand their functional role fragile forest ecosystem and to formulate the better conservation and management strategies in future.

Keywords: tropical forest, diverse, wildlife, ecosystem, habitat, vegetation

1. General background

Tropical forests are located at tropics of Cancer 23°N and Capricorn at 23.5°S to equator (Figure 1) [1]. Around 60% of the tropical forest occurs in Latin America, 25% in Asia-Pacific regions, and rest 15% in Africa [2]. These forests covered <5.0% of earth’s surface and comprised of 17,000 million ha, which is equal to 44.0% of the world’s forest cover and exhibits a higher richness and diversity of flora and fauna species. Tropical forests are rich in vegetation...
composition and structure (Figure 2), which has formulated heterogeneity of habitats to attract the wide array of wildlife species to inhabit and utilize the food resources in order to perform various activities and to increase the numbers of their individuals [3]. The richness and
diversity of vegetation could be due to the heterogeneity of topography, site quality, rainfall pattern, and temperature [4–9].

Tropical forests are intact habitats, which are rich in vegetation diversity and food resources that have attracted higher diversity of endemic, rare, threatened, and endangered wildlife species (i.e., such as mammals, birds, reptiles, and amphibians). The wildlife species directly or indirectly depends on tropical forests to perform various activities, such as inhabit, forage, loaf, perch, and breed for their survival and existence. Determining the wildlife population community parameters in the tropical forest habitats is vital important to understand the dynamics of the tropical habitat, ecological processes, and habitat disturbance vital for the occurrence, survival, and conservation of wildlife species.

2. Types of tropical forests

Tropical forests encompass 60% tropical rainforest, while remaining 40% are comprised of seasonally dry tropical forest, mangroves, tropical freshwater swamp forest, dry forest, open eucalyptus forests, tropical coniferous forest, savannah woodlands, and montane forests [10–12]. The tropical forests have been classified as (i) tropical moist broadleaf forests, (ii) tropical dry broadleaf forest, and (iii) tropical coniferous forest. The detail of each forest type has been given below:

2.1. Tropical moist broadleaf forests

These forests are the huge area located at equatorial belts between the tropics of Cancer and Capricorn dominated with semi-evergreen and evergreen deciduous tree species. They receive >200 cm rainfall annually [13]. The tree canopy is multilayered, that is, upper story (emergent crown), medium layer, lower canopy, shrub layer, and understory. These forests are home for more than 50% of world wildlife species. The occurrence of higher number of wildlife species is due to diversity of vegetation (i.e., >1000 plant species/km$^2$) and multilayered vegetation structure. For example, upper story is suitable habitats for apes, monkeys, flying squirrels, and birds (i.e., flycatchers), the understory layer harbored diversity of mammals (big cats) and avian species, (i.e., babblers, bulbuls, and pittas, etc.), while undergrowth vegetation is ideal habitat for gorillas, deer, amphibians, snakes, and lizards.

2.2. Tropical dry broadleaf forests

Tropical dry broadleaved forest is characterized with warm temperature and seasonal rainfalls that enable flora to withstand in rainy season as well as dry season to conserve water and shedding their leaves. These forests are located at tropical and subtropical latitudes, such as southern Mexico, Africa, the Lesser Sunda Islands, Central India, Indochina, Madagascar, New Caledonia, Eastern Bolivia and Central Brazil, Caribbean, North Andes, Ecuador, and Peru. They cover about 6 million km$^2$ or 4% of the Earth’s surface [14] and are dominated by teak, ebony, bamboo, and fig trees [15]. The soil is highly productive, and tree canopy may attain 10–30 m tall. Tropical dry broadleaved forest is suitable habitat for mammals (white-fronted capuchin monkeys, mantled howler monkeys, shrews, bats, coyotes, foxes, ringtails, raccoons,
badgers, bobcats, and mountain lions), birds (crested guan, magpie jay, hawks, and bull finches), snakes, lizards, etc.

2.3. Tropical coniferous forests

These forests occur in humid climate region at Nearctic and Neotropical Ecozones from Mid-Atlantic states to Nicaragua, the Greater Antilles, Bahamas, and Bermuda [16]. They are characterized by diverse coniferous species whose needles have adjusted to deal with low precipitation (around 2.4" or 60 mm) and moderate temperature (18 or 64°C or higher). These forests are dominated by Pinus caribaea, P. tropicalis, P. tecunumanii, P. ayacahuite, P. maximin, Byrsonima crassifolia, Colpothrinax wrightii, Chrysobalanus icaco, Quercus cubana, Calophyllum pinetorum, Erythroxylum minutifolium, Phania cajalbanica, Vaccinium cubense, Hyperbaena columbica, Clusia rosea, Aristida spp., Andropogon spp., Quercus corrupgata, Q. skinneri, Q. oleoides, Q. candicans, Q. acatenangensi, Q. brachystachys, Q. peduncularis, Q. polymorpha, and Q. conspersa. The crown canopy is close and thick, the understory is rich in shrubs and small trees, while the ground is dominantly covered with ferns and grasses. These forests have harbored wide array of mammals (such as Cervus unicolor, Muntiacus muntjak, Sus scrofa, Selenartos thiibetanus, Capricornis sumatraensis, Rafuta spp.) and bird species (i.e., Polyplectron chalcurn, Pericrocotus miniatus, Chloropsis venusia, Myophonos melanurus, Niltava sumatrana, Cincclidium diana, Pyconotus leuogrammicus, P. tympanistrigus, Hypsipetes virescens, Zosterops atricapillus, Garrulax palliatus, Napothera rufipectus, etc.).

3. Ecological importance of tropical forests

Tropical forests provide diverse ecosystem services, such as play major role in water cycle, that is, they return around 90.0% precipitation into the atmosphere in the form of water vapors, increase the life span of dams through reducing the sediments into rivers, mitigate the disasters through reducing soil erosion and land sliding, and reduce the intensity and severity of floods [17]. Tropical forests are vital important for human well-being, that is, they contribute major proportion in food security (i.e., around global crops and one-third food supply depend on wild pollinators), regulate weather condition, reduce the negative effects of climate change by acting pollution filters, and serve as storage biodiversity. It has been stated that tropical forest may harbor >50.0% of world’s terrestrial animal species [18]. Tropical forests play a crucial role in climate change, that is, the vegetation of tropical forest stored a huge amount of carbon taking from the atmosphere and stored in their various parts of the body (i.e., in leaves, stems, and roots, etc.) and serves as mega carbon storehouse or sinks (e.g., 25% store of world’s carbon). It has been known that tropical forest can store huge amount of carbon compared to those they release back into atmosphere, slow down the rate of carbon dioxide accumulation in the atmosphere, and reduce the effect of climate change. Hence, this indicated that tropical forests play a significant role to reduce the effects of climate change and reduce 12% emission of greenhouse gases into the atmosphere. Wildlife species are the essential component of the tropical forest ecosystem, that is, they play a major role, that is, pest control, pollination, and seed dispersal in tropical forest ecosystem [19]. At habitat level, the occurrence and richness of wildlife species represent a powerful tool to examine the current status of
particular ecosystem. This could be that wildlife species are ecologically specialized in habitat use, diet, and highly sensitive to habitat and microclimate alteration [20–22].

Being rich in biodiversity, the tropical forests have been vanished and altered due to anthropogenic activities [23–25], habitat destruction and fragmentation, invasive species, over-exploitation, and climate change [26–28].

4. Threats to tropical forests

Currently, tropical forests are facing severe potential threats due to human interventions, such as extensive habitat loss and degradation, isolation, and fragmentation due to heavy exploitation and conversions into agricultural fields and residential areas [29–31], which create a complex spatial disturbance [32–34]. More than 50% of the tropical forest areas have been lost during the past two decades through extensive deforestation for timber, fuelwood, agricultural expansion, and human-induced fire [35–37].

It has been stated that habitat loss and fragmentation of tropical forest is a major threat for wildlife species composition, relative abundance, species richness, and density, that is, it increases higher predation risk, reduced food occurrence and diversity, and genetic variability of birds, mammals, amphibians, and reptiles [38–43]. This may alter habitat thus makes it less productive and attractive thus caused the shift of wildlife species into human-dominated landscape that might be unsuitable and less productive for them [44–48]. However, the consequence of habitat loss and degradation may vary from species to species depending upon the nature and extent of habitat alteration, availability of food resources, and the rate of predation and parasitism [49, 50].

In addition, climate change is an important factor, which has effects on wildlife species phenology, geographic distribution, physiology, vegetation composition, and food resources [51, 52]. Thus, it ultimately exerts negative effects on the population community parameters of the species, i.e., some becomes endangered, vulnerable, and threatened [53–55]. This might be that the climate change may cause the rising of temperature and declining of the precipitation, which make the tropical forest dry and highly susceptible to fire and prone them into shrub lands, grassland, and savannah. The alteration in microclimate may alter the vegetation species composition, richness, and diversity [56, 57].

5. Wildlife fauna of tropical forests

5.1. Birds of tropical forests

Tropical forests are more diverse in vegetation structure and composition, which offer higher habitat complexity, that is, provide a diversity of nesting sites, greater protection from predators and harsh weather, and also plenty of food resources [58]. The vegetation climax and diversity had attracted a wide array of avian species, which are habitat and diet specialist in nature. For example, Black-naped Monarch—*Hypothyms azurea*—often prefers canopy and foraged on flying insects, Blue-headed Pitta—*Pitta baudii*—prefers to utilized the ground.
vegetation of evergreen broadleaved forest and prey on caterpillars of insects occurs in grasses, and Scarlet-rumped Trogon—*Harpactes duvaucelli*—is middle story bird often associated with evergreen broadleaved vegetation (Figures 3–5). They prefer to utilize old mature trees (large diameter and height) for foraging and nesting [59, 60]. Avian species often play a crucial role in forest ecosystem functions, that is, they pollinate the flowers and disperse the seeds from one

Figure 3. Black-naped monarch—*Hypothymis azurea*.

Figure 4. Blue-headed pitta—*Pitta baudii*.

Figure 5. Scarlet-rumped Trogon—*Harpactes duvaucelli*.
part of the forest to another [61–63] and control the pest such as rodents, insects, and squirrels, which may cause damage to the forest foliage.

Tropical forest birds are vulnerable to habitat loss, fragmentation, and changes in land use patterns [64–67]. This could be that habitat loss and fragmentation may alter the vegetation structure and composition, reduce the food resources, increase predation and brood parasitism risk, and enhance the competition for food and space [68–71]. It has been illustrated that in Southeast Asia, tropical forests are facing highest rate of habitat destruction [72–76], which exerts immense pressure on the habitat use, foraging behavior, and breeding success of avian species (Table 1).

<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accipitridae</td>
<td><em>Haliastur indus</em></td>
<td>Brahminy kite</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Spilornis rufpectus</em></td>
<td>Sulawesi serpent eagle</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Accipiter trinotatus</em></td>
<td>Spot-tailed goshawk</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Ictiniaetus malayensis</em></td>
<td>Black eagle</td>
<td>[76]</td>
</tr>
<tr>
<td>Bucerotidae</td>
<td><em>Penelopides exhartus</em></td>
<td>Sulawesi dwarf hornbill</td>
<td>[76]</td>
</tr>
<tr>
<td>Bucerotidae</td>
<td><em>Rhyticeros cassidix</em></td>
<td>Knobbed hornbill</td>
<td>[76]</td>
</tr>
<tr>
<td>Campephagidae</td>
<td><em>Coracina bicolor</em></td>
<td>Pied cuckooshrike</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Coracina leucopygia</em></td>
<td>White-rumped cuckooshrike</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Coracina morio</em></td>
<td>Sulawesi cicadabird</td>
<td>[76]</td>
</tr>
<tr>
<td>Cardinalidae</td>
<td><em>Cyanocompsa parellina</em></td>
<td>Blue bunting</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Passerina cyanea</em></td>
<td>Indigo bunting</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Granatellus sallaei</em></td>
<td>Gray-throated chat</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Habia fuscicauda</em></td>
<td>Red-throated ant tanager</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Piranga rosecularis</em></td>
<td>Rose-throated ant tanager</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Piranga rubra</em></td>
<td>Summer tanager</td>
<td>[77]</td>
</tr>
<tr>
<td>Columbidae</td>
<td><em>Ducula aenea</em></td>
<td>Green imperial pigeon</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Ducula forsteni</em></td>
<td>White-bellied imperial pigeon</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Ducula lucida</em></td>
<td>Silver-tipped imperial pigeon</td>
<td>[78]</td>
</tr>
<tr>
<td></td>
<td><em>Macropygia ambinensis</em></td>
<td>Brown cuckoo-dove</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Teron griecicauda</em></td>
<td>Gray-checked green pigeon</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Ptilinopus melanospila</em></td>
<td>Black-naped fruit dove</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Taracoma manadensis</em></td>
<td>Sulawesi black pigeon</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Patagioenas flavirostris</em></td>
<td>Red-billed pigeon</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Columbina passerina</em></td>
<td>Common ground dove</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Columbina talpacoti</em></td>
<td>Ruddy ground dove</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Leptotila verreauxi</em></td>
<td>White-tipped dove</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td><em>Leptotila jamaicensis</em></td>
<td>Caribbean dove</td>
<td>[77]</td>
</tr>
<tr>
<td>Corvidae</td>
<td><em>Corvus typicus</em></td>
<td>Piping crow</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td><em>Psilorhinus morio</em></td>
<td>Brown jay</td>
<td>[77]</td>
</tr>
<tr>
<td>Family</td>
<td>Scientific name</td>
<td>Common name</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------</td>
<td>------------------------</td>
<td>--------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Cuculidae</td>
<td>Cyanocorax yncas</td>
<td>Green jay</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Cyanocorax yucatanicus</td>
<td>Yucatan jay</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Surniculus ludabris</td>
<td>Drongo cuckoo</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Centropus celebensis</td>
<td>Bay coucal</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Pituca cyana</td>
<td>Squirrel cuckoo</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Dromococcyx phasamelus</td>
<td>Pheasant cuckoo</td>
<td>[77]</td>
</tr>
<tr>
<td>Dicaeidae</td>
<td>Dicrurus aurorubidatus</td>
<td>Yellow-sided flowerpecker</td>
<td>[76]</td>
</tr>
<tr>
<td>Dicrurus celebis</td>
<td>Gray-sided flowerpecker</td>
<td></td>
<td>[76]</td>
</tr>
<tr>
<td>Dicrurus listus</td>
<td>Hair-crested drongo</td>
<td></td>
<td>[76]</td>
</tr>
<tr>
<td>Emberizidae</td>
<td>Arremonops rufivirgatus</td>
<td>Olive sparrow</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Arremonops chloromotus</td>
<td>Green-backed sparrow</td>
<td>[77]</td>
</tr>
<tr>
<td>Fringillidae</td>
<td>Euphonia affinis</td>
<td>Scrub euphonia</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Euphonia hirundinacea</td>
<td>Yellow-throated euphonia</td>
<td>[77]</td>
</tr>
<tr>
<td>Furnariidae</td>
<td>Dendrocincla anabatina</td>
<td>Twany-winged woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Dendrocincla homochroa</td>
<td>Ruddy woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Sittacrus gryacapillus</td>
<td>Olivaceous woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Xiphophinhia flavipes</td>
<td>Ivory-billed woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td>Icteridae</td>
<td>Dives dives</td>
<td>Melodious blackbird</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Molothrus aeneus</td>
<td>Bronzed cowbird</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Icterus prosthemelas</td>
<td>Black-cowled oriole</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Icterus cucullatus</td>
<td>Hooded oriole</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Icterus chryseter</td>
<td>Yellow-backed oriole</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Icterus mesomelas</td>
<td>Yellow-tailed oriole</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Icterus auratus</td>
<td>Orange oriole</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Icterus galalae</td>
<td>Altamira oriole</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Amblycercus holosericeus</td>
<td>Yellow-billed cacique</td>
<td>[77]</td>
</tr>
<tr>
<td>Mimidae</td>
<td>Melanoptyla glabriostis</td>
<td>Black catbird</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Dunetella carolinensis</td>
<td>Gray catbird</td>
<td>[77]</td>
</tr>
<tr>
<td>Monotidae</td>
<td>Momotus momota</td>
<td>Amazonian motmot</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Eumomota superciliosa</td>
<td>Turquoise-browed motmot</td>
<td>[77]</td>
</tr>
<tr>
<td>Monarchidae</td>
<td>Hypothymis azurea</td>
<td>Black-naped monarch</td>
<td>[76]</td>
</tr>
<tr>
<td>Nectariniidae</td>
<td>Nectarinina aspasia</td>
<td>Black sunbird</td>
<td>[76]</td>
</tr>
<tr>
<td>Odontophoridae</td>
<td>Dactylortyx thoracicus</td>
<td>Singing quail</td>
<td>[77]</td>
</tr>
<tr>
<td>Oriolidae</td>
<td>Oriolus chinensis</td>
<td>Black-naped oriole</td>
<td>[76]</td>
</tr>
<tr>
<td>Parulidae</td>
<td>Vermivora cyanoptera</td>
<td>Blue-winged warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Oreothlypis peregrina</td>
<td>Tennessee warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Setophaga americana</td>
<td>Northern parula</td>
<td>[77]</td>
</tr>
<tr>
<td>Family</td>
<td>Scientific name</td>
<td>Common name</td>
<td>Reference</td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------</td>
<td>------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td></td>
<td>Setophaga magnolia</td>
<td>Magnolia warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Setophaga caerulescens</td>
<td>Black-throated blue warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Setophaga virens</td>
<td>Black-throated green warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Setophaga dominica</td>
<td>Yellow-throated warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Mnioptila varia</td>
<td>Black-and-white warbler</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Setophaga ruticilla</td>
<td>American redstart</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Seiurus aurocapilla</td>
<td>Ovenbird</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Geothlypis trichas</td>
<td>Common yellowthroat</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Setophaga citrina</td>
<td>Hooded warbler</td>
<td>[77]</td>
</tr>
<tr>
<td>Pellorneidae</td>
<td>Trichastoma celerense</td>
<td>Sulawesi babbler</td>
<td>[76]</td>
</tr>
<tr>
<td>Phasianidae</td>
<td>Gallus gallus</td>
<td>Red junglefowl</td>
<td>[76]</td>
</tr>
<tr>
<td>Picidae</td>
<td>Mulleripicus fulvus</td>
<td>Ashy woodpecker</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Melanerpes aurifrons</td>
<td>Golden-fronted woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Picoides scalaris</td>
<td>Ladder-backed woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Veniliornis fumigatus</td>
<td>Smoky-brown woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Colaptes rubiginosus</td>
<td>Golden-olive woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Dryocopus lineatus</td>
<td>Lineated woodpecker</td>
<td>[77]</td>
</tr>
<tr>
<td>Pittidae</td>
<td>Pitta erythrouraster</td>
<td>Blue-breasted pitta</td>
<td>[76]</td>
</tr>
<tr>
<td>Poliopitidae</td>
<td>Ramphocelus melanurus</td>
<td>Long-billed gnat wren</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Poliopitila caerulea</td>
<td>Blue-gray gnatchatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Poliopitila plumea</td>
<td>Tropical gnatchatcher</td>
<td>[77]</td>
</tr>
<tr>
<td>Psittacidae</td>
<td>Tanygnathus sumatranus</td>
<td>Blue-backed parrot</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Aratinga nana</td>
<td>Olive-throated parakeet</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Amazona albitrons</td>
<td>White-fronted parrot</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Trichoglossus ornatus</td>
<td>Ornate lorikeet</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Priomitrurus platirus</td>
<td>Golden-mantled racquet-tailed parrot</td>
<td>[76]</td>
</tr>
<tr>
<td>Stenostiridae</td>
<td>Culicicapa helianthea</td>
<td>Citrine flycatcher</td>
<td>[76]</td>
</tr>
<tr>
<td>Sturnidae</td>
<td>Aplonis panurus</td>
<td>Asian glossy starling</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Basilornis celebensis</td>
<td>Sulawesi-crested myna</td>
<td>[76]</td>
</tr>
<tr>
<td></td>
<td>Streptocitta albicollis</td>
<td>White-necked myna</td>
<td>[76]</td>
</tr>
<tr>
<td>Thamnophilidae</td>
<td>Thamnophilus dolius</td>
<td>Barred antshrike</td>
<td>[77]</td>
</tr>
<tr>
<td>Thraupidae</td>
<td>Eucometis penicillata</td>
<td>Gray-headed tanager</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Cyanerpes cyanus</td>
<td>Red-legged honeycreeper</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Sporophila torquata</td>
<td>White-collard seedeater</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Tiaris olivaceus</td>
<td>Yellow-faced grassquit</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Saltator coerulescens</td>
<td>Grayish saltator</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Saltator atriceps</td>
<td>Black-headed saltator</td>
<td>[77]</td>
</tr>
<tr>
<td>Family</td>
<td>Scientific name</td>
<td>Common name</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------------------</td>
<td>------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Tityridae</td>
<td>Pachyramphus major</td>
<td>Gray-collared becard</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Pachyramphus aglaiae</td>
<td>Rose-throated becard</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Tityra semifasciata</td>
<td>Masked tityra</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Tityra inquisitor</td>
<td>Black-crowned tityra</td>
<td>[77]</td>
</tr>
<tr>
<td>Trogodytidae</td>
<td>Puegopodius maculipictus</td>
<td>Spot-breasted wren</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Thrityrothorus ludovicaius</td>
<td>Carolina wren</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Uropsila leucogaster</td>
<td>White-bellied wren</td>
<td>[77]</td>
</tr>
<tr>
<td>Trogonidae</td>
<td>Trogon melanoleophalus</td>
<td>Black-headed trogon</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Trogon caligatus</td>
<td>Gartered trogon</td>
<td>[77]</td>
</tr>
<tr>
<td>Turdidae</td>
<td>Hylocichla mustelina</td>
<td>Wood thrush</td>
<td>[77]</td>
</tr>
<tr>
<td>Turdidae</td>
<td>Turdus grani</td>
<td>Clay-colored thrush</td>
<td>[77]</td>
</tr>
<tr>
<td>Tyrannidae</td>
<td>Camptostoma imberbe</td>
<td>Northern beardless tyrannulet</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Myiopagis viridicina</td>
<td>Greenish elaenia</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Elaenia flavogaster</td>
<td>Yellow-bellied elaenia</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Oncostoma cineregalare</td>
<td>Northern bentbill</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Tolchomyias sulphurescens</td>
<td>Yellow-olive flatbill</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Platyrhinchus cancruminus</td>
<td>Stub-tailed spadebill</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Contopus virens</td>
<td>Eastern wood pewee</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Contopus cinereus</td>
<td>Tropical pewee</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Empidonax minimus</td>
<td>Least flycatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Attila spadicea</td>
<td>Bright-rumped attila</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Myiarchus yucatanensis</td>
<td>Yucatan flycatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Myiarchus tuberculifer</td>
<td>Dusky-capped flycatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Myiarchus tyrannulus</td>
<td>Brown-crested flycatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Pitangus sulphuratus</td>
<td>Great kiskadee</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Megarynchus pitangua</td>
<td>Boat-billed flycatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Myiartletes similis</td>
<td>Social flycatcher</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Tyrannus melanochilicus</td>
<td>Tropical kingbird</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Tyrannus couchii</td>
<td>Couch’s kingbird</td>
<td>[77]</td>
</tr>
<tr>
<td>Vireonidae</td>
<td>Vireo griseus</td>
<td>White-eyed vireo</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Vireo pallens</td>
<td>Mangrove vireo</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Vireo flavifrons</td>
<td>Yellow-throated vireo</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Hyllocharis decurtatus</td>
<td>Lesser greenlet</td>
<td>[77]</td>
</tr>
<tr>
<td></td>
<td>Cyclarhis guianensis</td>
<td>Rufous-browed pepper shrike</td>
<td>[77]</td>
</tr>
<tr>
<td>Zosteropidae</td>
<td>Zosterops celebensse</td>
<td>Pale-bellied white-eye</td>
<td>[76]</td>
</tr>
</tbody>
</table>

Table 1. List of bird species occurring in tropical forests.
5.2. Mammals of tropical forests

Mammals are crucial element of tropical forest ecosystems [78, 79]. They exhibit a wide range of niches, exploit diverse tropical forest resources, and play a crucial role in vegetation composition and ecosystem functions, i.e., they forage on the grasses, control weed, pollinate flowers especially bats, and disperse seed from one area to another area after consuming in the form of pallets [63, 80–83].

Mammals are considered the third most threatened and endangered animals, for example, Mantled Hawler Monkey—*Alouatta palliata*—and Amazonian Tapir—*Tapirus terrestris*—(Figures 6 and 7) due to habitat loss and destruction, illegal hunting, and trapping [84–86]. It has been stated that >30% mammal species are threatened and their population is still declining day by day through a variety of ways [87] (Table 2).

Figure 6. Mantled Hawler monkey—*Alouatta palliata*.

Figure 7. Amazonian tapir—*Tapirus terrestris*.

Tropical Forests Are An Ideal Habitat for Wide Array of Wildlife Species

http://dx.doi.org/10.5772/intechopen.73315
<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Atelidae</td>
<td>Alouatta palliata</td>
<td>Mantled howler monkey</td>
<td>[87]</td>
</tr>
<tr>
<td>Bovidae</td>
<td>Cephalophus harveyi</td>
<td>Harvey's duiker</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Cephalophus spadix</td>
<td>Abbott's duiker</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Neotragus moschatus</td>
<td>Suni</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Syncerus caffer</td>
<td>African buffalo</td>
<td>[88]</td>
</tr>
<tr>
<td>Bradypodidae</td>
<td>Bradypus variegatus</td>
<td>Brown-throated slot</td>
<td>[87]</td>
</tr>
<tr>
<td>Canidae</td>
<td>Lycalopex culpaeus</td>
<td>Andean fox</td>
<td>[87]</td>
</tr>
<tr>
<td>Cebidae</td>
<td>Cebus aequatorialis</td>
<td>Ecuadorian capuchin</td>
<td>[87]</td>
</tr>
<tr>
<td>Cercopithecida</td>
<td>Cercocebus saniei</td>
<td>Sanje mangabey</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Papio cynocephalus</td>
<td>Yellow baboon</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Procolobus gordonorum</td>
<td>Udzungwa red colobus</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Colobus angolensis</td>
<td>Angolan colobus</td>
<td>[88]</td>
</tr>
<tr>
<td>Cuniculidae</td>
<td>Cuniculus paca</td>
<td>Lowland paca</td>
<td>[87]</td>
</tr>
<tr>
<td>Dasyproctidae</td>
<td>Dasypus punctatus</td>
<td>Central American agouti</td>
<td>[87]</td>
</tr>
<tr>
<td>Didelphidae</td>
<td>Didelphis marsupialis</td>
<td>Common opossum</td>
<td>[87]</td>
</tr>
<tr>
<td>Elephantidae</td>
<td>Loxodonta africana</td>
<td>African elephant</td>
<td>[88]</td>
</tr>
<tr>
<td>Erinaceaeida</td>
<td>Echinosorex gymnura</td>
<td>Moon rat</td>
<td>[89]</td>
</tr>
<tr>
<td>Felidae</td>
<td>Herpailurus yagouaroundi</td>
<td>Eyra cat</td>
<td>[87]</td>
</tr>
<tr>
<td></td>
<td>Leopardus pardalis</td>
<td>Ocelot cat</td>
<td>[87]</td>
</tr>
<tr>
<td></td>
<td>Puma concolor</td>
<td>Cougar</td>
<td>[87]</td>
</tr>
<tr>
<td></td>
<td>Panthera pardus</td>
<td>Leopard</td>
<td>[88]</td>
</tr>
<tr>
<td>Herpestidae</td>
<td>Herpestes brachyurus</td>
<td>Short-tailed mongoose</td>
<td>[89]</td>
</tr>
<tr>
<td>Herpestidae</td>
<td>Bdeogale crassicauda</td>
<td>Bushy-tailed mongoose</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Mungos mongo</td>
<td>Banded mongoose</td>
<td>[88]</td>
</tr>
<tr>
<td>Hystricidae</td>
<td>Hystricomys placomys</td>
<td>Cape porcupine</td>
<td>[88]</td>
</tr>
<tr>
<td>Macroscelida</td>
<td>Rhynchocyon cirnei</td>
<td>Checkerboard elephant shrew</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Rhynchocyon udzungwoensis</td>
<td>Gray-faced elephant shrew</td>
<td>[88]</td>
</tr>
<tr>
<td></td>
<td>Petrodromus tetradactylus</td>
<td>Four-toed elephant shrew</td>
<td>[88]</td>
</tr>
<tr>
<td>Megalonychidae</td>
<td>Cholepus hoffmanni</td>
<td>Hoffmann's two-toed slot</td>
<td>[87]</td>
</tr>
<tr>
<td>Muridae</td>
<td>Leopoldamys sabanus</td>
<td>Long-tailed giant rat</td>
<td>[89]</td>
</tr>
<tr>
<td></td>
<td>Maxomys baikii</td>
<td>Small spiny rat</td>
<td>[89]</td>
</tr>
<tr>
<td></td>
<td>Maxomys ochraceiventor</td>
<td>Chestnut-bellied spiny rat</td>
<td>[89]</td>
</tr>
<tr>
<td></td>
<td>Maxomys raiasi</td>
<td>Rajah spiny rat</td>
<td>[89]</td>
</tr>
<tr>
<td></td>
<td>Maxomys surifer</td>
<td>Red spiny rat</td>
<td>[89]</td>
</tr>
<tr>
<td></td>
<td>Maxomys whitehead</td>
<td>Whitehead's spiny rat</td>
<td>[89]</td>
</tr>
<tr>
<td></td>
<td>Niviventer cremeroviensis</td>
<td>Dark-tailed tree rat</td>
<td>[89]</td>
</tr>
</tbody>
</table>
5.3. Amphibians of tropical forests

Amphibians are most abundant vertebrate in tropical forests, that is, they vary in color, behavior, habitat selection, size, and population density. Tropical amphibians are widely distributed and habitat specialist animals, that is, they often prefer the riparian areas of tropical forests (Figure 8). Amphibians depend on multiple environmental gradients and are closely

---

**Table 2.** List of mammal species occurring in tropical forests.

<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rattus exulans</td>
<td>Polynesian rat</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Rattus rattus</td>
<td>Black rat</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Rattus tiomanicus</td>
<td>Malayan field rat</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Sundamys muelleri</td>
<td>Muller’s giant suna rat</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Eira barbara</td>
<td>Tayra</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Lontra longicaudis</td>
<td>Neotropical otter</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Mellivora capensis</td>
<td>Honey badger</td>
<td>[88]</td>
<td></td>
</tr>
<tr>
<td>Taminudia mexicana</td>
<td>Northern tamandua</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Nandiniinae</td>
<td>African palm civet</td>
<td>[88]</td>
<td></td>
</tr>
<tr>
<td>Cricetomys gambianus</td>
<td>Giant pouched rat</td>
<td>[88]</td>
<td></td>
</tr>
<tr>
<td>Dendrohyrax arboresus</td>
<td>Tree hyrax</td>
<td>[88]</td>
<td></td>
</tr>
<tr>
<td>Susus narica</td>
<td>White-nosed coati</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Potos flavus</td>
<td>Kinkajou</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Sciurus granatensis</td>
<td>Red-tailed squirrel</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Simosciurus stramineus</td>
<td>Guayaquil squirrel</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Glyphotes simus</td>
<td>Sculptor squirrel</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Sundasciurus brocki</td>
<td>Brooke’s squirrel</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Sundasciurus hippocus</td>
<td>Horse-tailed squirrel</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Lariscus hosei</td>
<td>Four-striped ground squirrel</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Sundasciurus lowii</td>
<td>Low’s squirrel</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Sundasciurus tenuis</td>
<td>Slender squirrel</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Paracetus ursus</td>
<td>Tanganyika mountain squirrel</td>
<td>[88]</td>
<td></td>
</tr>
<tr>
<td>Potamochoerus larvatus</td>
<td>Bush pig</td>
<td>[88]</td>
<td></td>
</tr>
<tr>
<td>Pecari tajacu</td>
<td>Collard peccary</td>
<td>[87]</td>
<td></td>
</tr>
<tr>
<td>Tupae gracilis</td>
<td>Slender tree shrew</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Tupae minor</td>
<td>Pygmy tree shrew</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Tupae tana</td>
<td>Large tree shrew</td>
<td>[89]</td>
<td></td>
</tr>
<tr>
<td>Civettictis civetta</td>
<td>African civet</td>
<td>[88]</td>
<td></td>
</tr>
</tbody>
</table>
associated with habitat types, such as riparian, forest, streams, and path or road edge. Amphibian community structure was influenced by habitat heterogeneity, stream turbidity, river size, water depth, occurrence of aquatic vegetation, and density of understorey vegetation [90]. They are closely associated with habitat structure, food resources, and microclimate variables, that is, temperature and precipitation.

The loss of amphibians seriously disturbed ecological function of tropical food chain and food web. This could be that they are important component in tropical food web, that is, have occupied diverse niches from planktivore to carnivore and often serves as major sources of food for wildlife species in tropical forest. From the ecological point of view, they are best indicators of habitat fragments, ecosystem stress, and aquatic pollution, etc. In addition, amphibians have been used in ecological, embryological, physiological, and genetic research purposes.

One-third populations of amphibian species had been listed as threatened and endangered due to human intervention [91, 92]. Habitat characteristics [93], habitat fragments due to forest logging [94–98], habitat loss and degradation [99–101], environment variables [102], invasive predator species [103], diseases [104], and leaf litter [105] are major driven factors which effect on amphibian assemblages and population parameters. However, the effect of these driven factors may vary depending on the nature of the habitat disturbance, change in microclimate, and alteration in food resource. This could be that the leaf litter, canopy cover, tree size, stream size, availability of river, and refuge areas are highly essential for their survival and reproduction (Table 3) [106, 107].

5.4. Reptiles of tropical forests

Tropical forest is diverse and complex ecosystem which harbors most abundant and diverse reptile species [112]. Reptiles are primary consumers, that is, they prey on many animal species, such as birds, mammals, and amphibians (Figure 9). They provide ecological services into tropical forest ecosystem, such as control the population of pest (i.e., insects, rodents,
<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arthropleptidae</td>
<td>Cardioglossa leucomystax</td>
<td>Silver long-fingered frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Leptopelis hyloides</td>
<td>African tree frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Leptopelis occidentalis</td>
<td>Tai forest tree frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Leptopelis macroeis</td>
<td>Big-eyed forest tree frog</td>
<td>[108]</td>
</tr>
<tr>
<td>Astylosternidae</td>
<td>Astylosternus occidentalis</td>
<td>Western night frog</td>
<td>[108]</td>
</tr>
<tr>
<td>Bufonidae</td>
<td>Rhinella marina</td>
<td>Cane toad</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Incilius nebulifer</td>
<td>Coastal-plain toad</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Ansonia muelleri</td>
<td>Muller’s toad</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Chaunus marinus</td>
<td>Cane toad</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Olotis marmorae</td>
<td>Marbled toad</td>
<td>[110]</td>
</tr>
<tr>
<td>Ceratobatrachidae</td>
<td>Platymantis corrugatus</td>
<td>Rough-backed forest frog</td>
<td>[111]</td>
</tr>
<tr>
<td>Craugastoridae</td>
<td>Craugastor decoratus</td>
<td>Adorned robber frog</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Craugastor mexicanus</td>
<td>Mexican robber frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Craugastor hobartsmithi</td>
<td>Pygmy robber frog</td>
<td>[110]</td>
</tr>
<tr>
<td>Dicroglossidae</td>
<td>Limnonectes magnus</td>
<td>Mindanao-fanged frog</td>
<td>[111]</td>
</tr>
<tr>
<td>Eleutherodactylidae</td>
<td>Eleutherodactylus longipes</td>
<td>Long-footed chirping frog</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Eleutherodactylus verrucipes</td>
<td>Big-eared chirping frog</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Eleutherodactylus modestus</td>
<td>Blunt-toed chirping frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Eleutherodactylus nitidus</td>
<td>Spiny peeping frog</td>
<td>[110]</td>
</tr>
<tr>
<td>Hylidae</td>
<td>Ecnomiohyla mistypharynx</td>
<td>Small-eared tree frog</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Smilisca baudini</td>
<td>Baudin’s tree frog</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Trachycephalus typhonius</td>
<td>Warty tree frog</td>
<td>[109]</td>
</tr>
<tr>
<td></td>
<td>Exerodonta smaragdina</td>
<td>Emerald tree frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Pachymedusa dacnicolor</td>
<td>Mexican leaf frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Smilisca baudini</td>
<td>Mexican tree frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Smilisca fodiens</td>
<td>Lowland burrowing tree frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Talocohyla smithii</td>
<td>Dwarf Mexican tree frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Trachycephalus venulosus</td>
<td>Veined tree frog</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Triprion spatulatus</td>
<td>Shovel-nosed tree frog</td>
<td>[110]</td>
</tr>
<tr>
<td>Hyperoliidae</td>
<td>Hyperolius concolor</td>
<td>Hallowell’s sedge frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Hyperolius guttulatus</td>
<td>Dotted reed frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Hyperolius picturatus</td>
<td>Tanzania reed frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Hyperolius sylvaticus</td>
<td>Bobiri reed frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Hyperolius zonatus</td>
<td>Nimba reed frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Hyperolius fuscaevus</td>
<td>Lime reed frog</td>
<td>[108]</td>
</tr>
<tr>
<td></td>
<td>Hyperolius chlorosteus</td>
<td>Sierra Leone reed frog</td>
<td>[108]</td>
</tr>
</tbody>
</table>
squirrels, tree shrews, small birds, etc. [113, 114], which are destructive to the vegetation. Likewise, they are also source of food for other animals, such as birds, mammals, amphibians, and even reptiles [115].

Reptiles are facing severe threats due to human activities, that is, habitat loss, and indiscriminate trapping and hunting for their skin and food thus become threatened and endangered [116–118]. The population decline of various reptile species in tropical forest may cause ecological imbalance that affected on the ecological functions (Table 4) [119, 120].

<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afrixalus dorsalis</td>
<td>Brown banana frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Afrixalus nigeriensis</td>
<td>Nigeria banana frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Afrixalus vibekae</td>
<td>Nimba banana frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Kassina lamottei</td>
<td>Rainforest running frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Acanthixalus somiae</td>
<td>Ivory Coast wart frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Leptodactylidae</td>
<td>Leptodactylus melanomotus</td>
<td>Black-backed frog</td>
<td>[110]</td>
</tr>
<tr>
<td>Megophryidae</td>
<td>Megophrys stejnegeri</td>
<td>Mindanao-horned frog</td>
<td>[111]</td>
</tr>
<tr>
<td>Microhylidae</td>
<td>Gastrophryneusta</td>
<td>Two-spaded narrow-mouthed toad</td>
<td>[110]</td>
</tr>
<tr>
<td>Phrynobatrachidae</td>
<td>Phrynobatrachus guttatus</td>
<td>Chabanaud’s river frog</td>
<td>[108]</td>
</tr>
<tr>
<td>Phrynobatrachus fraterculus</td>
<td>Macenta river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus guineensis</td>
<td>Guinea river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus phyllophilus</td>
<td>Tai river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus liberiensis</td>
<td>Liberia river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus alleni</td>
<td>Allen’s river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus plicatus</td>
<td>Coast river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus taiensis</td>
<td>Rugegewald river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Phrynobatrachus annulatus</td>
<td>Ringed river frog</td>
<td>[108]</td>
<td></td>
</tr>
<tr>
<td>Ranidae</td>
<td>Lithobates berlandieri</td>
<td>Rio Grande leopard frog</td>
<td>[109]</td>
</tr>
<tr>
<td>Lithobates johni</td>
<td>Moore’s frog</td>
<td>[109]</td>
<td></td>
</tr>
<tr>
<td>Lithobates spectabilis</td>
<td>Snowy leopard frog</td>
<td>[109]</td>
<td></td>
</tr>
<tr>
<td>Staurops natator</td>
<td>Rock frog</td>
<td>[111]</td>
<td></td>
</tr>
<tr>
<td>Rana grandocula</td>
<td>Big-eyed frog</td>
<td>[111]</td>
<td></td>
</tr>
<tr>
<td>Lithobates forreri</td>
<td>Forr’s grass frog</td>
<td>[110]</td>
<td></td>
</tr>
<tr>
<td>Rhacophoridae</td>
<td>Polypedates lecomptax</td>
<td>Four-lined tree frog</td>
<td>[111]</td>
</tr>
<tr>
<td>Philautus acutirostris</td>
<td>Pointed-snouted tree frog</td>
<td>[111]</td>
<td></td>
</tr>
<tr>
<td>Chiromantis rufescens</td>
<td>African foam-nested tree frog</td>
<td>[108]</td>
<td></td>
</tr>
</tbody>
</table>

Table 3. List of amphibian species occurring in tropical forests.
Figure 9. Reticulated python—*Python reticulatus*.

<table>
<thead>
<tr>
<th>Family</th>
<th>Scientific name</th>
<th>Common name</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agamidae</td>
<td><em>Gonocephalus semperi</em></td>
<td>Mindoro forest dragon</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td><em>Psytolaemus galaris</em></td>
<td>Green fan-throated lizard</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Gerrhonotus liecephalus</em></td>
<td>Alligator lizard</td>
<td>[110]</td>
</tr>
<tr>
<td>Boidae</td>
<td><em>Boa constrictor</em></td>
<td>Red-tailed boa snake</td>
<td>[110]</td>
</tr>
<tr>
<td>Colubridae</td>
<td><em>Boiga dendrophila</em></td>
<td>Golden-ringed cat snake</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td><em>Psammodynastes pulverulentus</em></td>
<td>Common mock viper</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td><em>Oligodon maculatus</em></td>
<td>Barred short-headed snake</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td><em>Calamaria gervaisii</em></td>
<td>Philippine dwarf/Gervais’ worm Snake</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td><em>Lycodon dumerili</em></td>
<td>Dumeril’s wolf snake</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td><em>Lycodon aulicus</em></td>
<td>Indian wolf snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Lycodon jara</em></td>
<td>Twin-spotted wolf snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Lycodon zawi</em></td>
<td>Zaw’s wolf snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Oligodon dorsalis</em></td>
<td>Gray’s kukri snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Oligodon taeniolata</em></td>
<td>Streaked kukri snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Psammodynastes pulverulentus</em></td>
<td>Common mock viper</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Ptyas korros</em></td>
<td>Indo–Chinese rat snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Ptyas mucosa</em></td>
<td>Oriental rat snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td><em>Rhabdophis subminiatus</em></td>
<td>Red-necked Keelback snake</td>
<td>[121]</td>
</tr>
<tr>
<td>Family</td>
<td>Scientific name</td>
<td>Common name</td>
<td>Reference</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------</td>
<td>-----------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Dipsadidae</td>
<td>Dipnas gaigeae</td>
<td>Gaige’s thirst snail-eater snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Drymarchon corais</td>
<td>Indigo snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Drymobius margaritiferus</td>
<td>Speckled racer snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Imantodes gemmistratus</td>
<td>Central American tree snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Lampropeltis triangulum</td>
<td>Milk snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Leptotiphis diplopops</td>
<td>Pacific Coast parrot snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Masticophis mentoivarius</td>
<td>Neotropical whip snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Oxybelis aeneus</td>
<td>Mexican vine snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Senticolis triapris</td>
<td>Green rat snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Sibon nebulata</td>
<td>Clouded snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Tantilla calamarina</td>
<td>Pacific Coast centipede snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Trimorphodon biscutatus</td>
<td>Western Lyre snake</td>
<td>[110]</td>
</tr>
<tr>
<td>Dactyloidae</td>
<td>Anolis nebulosus</td>
<td>Clouded anole</td>
<td>[110, 122]</td>
</tr>
<tr>
<td>Dipsadidae</td>
<td>Hypsiglena torquata</td>
<td>Night snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Leptodeira maculata</td>
<td>South-western cat-eyed snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Manolepis putnami</td>
<td>Ridge-head snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Pseudoleptodeira latifasciata</td>
<td>False cat-eyed snake</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Leptodeira uribeii</td>
<td>Uribe’s false cat-eyed snake</td>
<td>[110]</td>
</tr>
<tr>
<td>Elapidae</td>
<td>Naja kaouthia</td>
<td>Monocled cobra</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Naja naja</td>
<td>Indian cobra</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Ophiophagus hannah</td>
<td>King cobra</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Micrurus distans</td>
<td>West Mexican coral snake</td>
<td>[110]</td>
</tr>
<tr>
<td>Eublepharidae</td>
<td>Colomeyx elegans</td>
<td>Yucatan-banded gecko</td>
<td>[122]</td>
</tr>
<tr>
<td>Gekkonidae</td>
<td>Gekko mindorensis</td>
<td>Mindoro narrow-disked gecko</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus bouringii</td>
<td>Oriental leaf-towed gecko</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus brooksi</td>
<td>Brooke’s house gecko</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus flavicrasis</td>
<td>Yellow-bellied house gecko</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus frenatus</td>
<td>Pacific gecko</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus garnetti</td>
<td>Indo-Pacific gecko</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus platyurus</td>
<td>Flat-tailed house gecko</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Coleomeyx elegans</td>
<td>Yucatan-banded gecko</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Phyllodactylus lanei</td>
<td>Lane’s leaf-toed gecko</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Hemadactylus frenatus</td>
<td>Pacific gecko</td>
<td>[122]</td>
</tr>
<tr>
<td>Geoemydidae</td>
<td>Rhinoclemmys pulcherrima</td>
<td>Painted wood turtle</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Rhinoclemmys rubida</td>
<td>Mexican-spotted wood turtle</td>
<td>[110]</td>
</tr>
<tr>
<td>Helodermatidae</td>
<td>Heloderma horridum</td>
<td>Mexican-beaded lizard</td>
<td>[110, 122]</td>
</tr>
<tr>
<td>Iguanidae</td>
<td>Ctenosaura pectinata</td>
<td>Mexican spiny-tailed iguana</td>
<td>[110]</td>
</tr>
<tr>
<td>Family</td>
<td>Scientific name</td>
<td>Common name</td>
<td>Reference</td>
</tr>
<tr>
<td>---------------------</td>
<td>----------------------------------</td>
<td>---------------------------------------</td>
<td>-----------</td>
</tr>
<tr>
<td>Leptotyphlopidae</td>
<td>Leptotyphlops humilis</td>
<td>Western thread/Blind snake</td>
<td>[110]</td>
</tr>
<tr>
<td>Microhylidae</td>
<td>Hyperophius variolosus</td>
<td>Mexican narrow-mouthed toad</td>
<td>[110]</td>
</tr>
<tr>
<td>Pareidae</td>
<td>Pareas monticola</td>
<td>Common slug snake</td>
<td>[121]</td>
</tr>
<tr>
<td>Phrynosomatidae</td>
<td>Sceloporus melanorhinus</td>
<td>Black-nosed lizard</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Sceloporus utiformis</td>
<td>Spiny lizard</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Urosaurus bicarinatus</td>
<td>Tropical tree lizard</td>
<td>[110, 122]</td>
</tr>
<tr>
<td></td>
<td>Phrynosoma asio</td>
<td>Giant-horned lizard</td>
<td>[122]</td>
</tr>
<tr>
<td></td>
<td>Sceloporus uniformis celaenorrhinus</td>
<td>Yellow–backed Spiny Lizard</td>
<td>[122]</td>
</tr>
<tr>
<td>Plethodontidae</td>
<td>Chiropterotriton chondrostega</td>
<td>Gristle-headed splayfoot salamander</td>
<td>[109]</td>
</tr>
<tr>
<td>Pythonidae</td>
<td>Python reticulatus</td>
<td>Reticulated python</td>
<td>[111, 121]</td>
</tr>
<tr>
<td></td>
<td>Python molurus</td>
<td>Indian/Black-tailed python</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Loxocemus bicolor</td>
<td>Mexican burrowing python</td>
<td>[110]</td>
</tr>
<tr>
<td>Scincidae</td>
<td>Sphenomorphus variegatus</td>
<td>Variegated skink</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Sphenomorphus beyeri</td>
<td>Beyer’s sphenomorphus</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Lipinia pulchella</td>
<td>Yellow-striped slender tree skink</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Eutropis multicarinata borealis</td>
<td>Philippine mabuya</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Eutropis englei</td>
<td>Six–striped mabouya</td>
<td>[111]</td>
</tr>
<tr>
<td></td>
<td>Lygosoma bourringii</td>
<td>Bowring’s supple skink</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Lygosoma lineatum</td>
<td>Striped writhing skink</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Lygosoma punctata</td>
<td>Dotted writhing skink</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Sphenomorphus maculatus</td>
<td>Spotted forest skink</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Takydromus khasiensis</td>
<td>Java grass lizard</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Pleniodon parvulus</td>
<td>Southern pygmy skink</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Scincella assatus</td>
<td>Red forest skink</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Marisora brachypoda</td>
<td>Middle American short-limbed skink</td>
<td>[122]</td>
</tr>
<tr>
<td>Teiidae</td>
<td>Ameiva undulata</td>
<td>Rainbow amevia lizard</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Aspidoscelis linearissimus</td>
<td>Many-lined whiptail</td>
<td>[110]</td>
</tr>
<tr>
<td></td>
<td>Aspidoscelis communis lineatissima</td>
<td>Giant whiptail lizard</td>
<td>[110, 122]</td>
</tr>
<tr>
<td>Typhlopidae</td>
<td>Ramphotyphlops braminus</td>
<td>Brahminy blind snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Typhlops diardii</td>
<td>Diard’s blind snake</td>
<td>[121]</td>
</tr>
<tr>
<td></td>
<td>Typhlops jerdoni</td>
<td>Jerdon’s worm snake</td>
<td>[121]</td>
</tr>
<tr>
<td>Varanidae</td>
<td>Varanus bengalensis</td>
<td>Clouded monitor lizard</td>
<td>[121]</td>
</tr>
</tbody>
</table>
6. Conclusion

In conclusion, this review has attempted to highlight that the tropical forests are ideal habitat for a variety of wildlife species, especially birds, mammals, reptiles, and amphibians. This might be due to the occurrence of heterogeneity of vegetation structure and composition, richness and diversity of food resources, safe breeding and nesting sites, and shelter from predators and harsh weather. These forests should be kept intact, preserved, and managed scientifically on a sustainable basis to reduce the human interference and for future generation.

7. Recommendation for future research and conservation

Furthermore, in future, a detailed research on the wildlife ecology should be carried out by investigating the effects of independent environmental variables with respect to the habitat selection and association, vegetation structure and composition, home range and distribution, population parameters, occurrence of food resources and distribution, influence of human interventions on wildlife population, habitat disturbance, etc. This will help to identify the threats facing different wildlife species and their habitats, indicate the current status of wildlife population within the landscape, and determine the productivity of the particular area.

Author details

Muhammad Nawaz Rajpar

Address all correspondence to: rajparnawaz@gmail.com

Department of Forestry, Shaheed Benazir Bhutto University Sheringal, Dir Upper, KPK Pakistan

References


Tropical Forests Are An Ideal Habitat for Wide Array of Wildlife Species

http://dx.doi.org/10.5772/intechopen.73315


Tropical Forests Are An Ideal Habitat for Wide Array of Wildlife Species


[74] Posa MRC, Sodhi NS. Effects of anthropogenic land use on forest birds and butterflies in Subic Bay, Philippines. Biological Conservation. 2006;129:256-270


[80] Ingle N. Seed dispersal by wind, birds, and bats between Philippine montane rainforest and successional vegetation. Oecologia. 2003;134:251-261


[104] Cheng TL, Rovita SM, Wake DB, Vredenburg VT. Coincident mass extirpation of Neotropical amphibians with the emergence of the infection fungal pathogen *Batrachochytrium*


