

The text should read:

Growth and composition changes, complete vegetation, soils, and geologic maps, and 20 years of intense study of the tabonuco forest around the field station. Flora and Fauna Diversity: Puerto Rico stands as the fulcrum between the east-west arm of the Greater Antilles and the north-south arm of the Lesser Antilles. The flora and fauna of the island contain elements of both regions. While the insular pattern of reduced richness of the biota is evident in Puerto Rico, the island still has 547 native species of trees, 13 species of bats, 249 species of birds, 41 species of reptiles, and 22 species of amphibians. The Caribbean National Forest contains 225 tree species, 82 vertebrate species, and a wide variety of invertebrates. During 20 years of fieldwork at El Verde, there have been recorded 8 amphibians, reptiles, 24 birds, 6 mammals, and over 2,100 species of invertebrates. How to Use This List: Major groups are listed below in different tables because of the complexity of some groups compared to others. Only those species occurring within the El Verde Research Area are included. For plants, only the more commonly occurring species are given. A more complete list can be found in Odum and Pigeon (1970). For invertebrates, we give information on the principal strata where they occur: soil (SOI), litter (LIT = dead organic matter resting on the ground), understory (UND = from the litter to the bottom of the completely closed canopy of mature trees), and canopy (CAN = the closed leaf layer made up by the crowns of mature trees). These characterizations are based both on sampling data and knowledge of the general habits of different groups. The list of invertebrates is by necessity incomplete, and we anticipate that many new taxa will be added in the future. In particular, the holometabolous species (from Neuroptera on) are numerous and difficult to identify and should contribute more to the list as their taxonomy becomes clearer. Information on abundance is given for the better-studied vertebrates.

Habitats. Classification as rare or abundant is subjective where actual densities are not listed, and these categories may reflect different absolute abundances for different taxa.

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TABLE 1. The common plants at El Verde are listed below, with trees followed by shrubs et. al (1981).

Phylum: Spermatophyta

Class: Monocotyledones, Order: Palmales, Family: Palmaceae

Class: Dicotyledones

Subclass: Polypetalae

Order: Urticales, Family: Moraceae

Order: Magnoliales, Family: Lauraceae

"TREES"

Order: Sapindales, Family: Sapindaceae: *Matayba domingensis*

Order: Malvales, Family: Elaeocarpaceae, Flacourtiaceae: *Muntingia calabura*, *Homalium racemosum*

Order: Myrtales, Family: Combretaceae: *Terminalia sintenisii*, *Eugenia jambos*

Order: Leguminosae, Family: Mimosaceae: *Inga laurina*, *Inga vera*

Family: Fabaceae: *Ormosia krugii*

Order: Rurales, Family: Rutaceae.

Rutaceae *Zanthoxylon* Family: Burseraceae *Dacryodes* Family: Meliaceae *Guarea guidonia* Order: Euphorbiales Family: Euphorbiaceae *Alchorneopsis floribunda* *Croton poecilanthos* *Sapium Laurocerasus male* *Manilkara bidentata* Family: Myrtaceae *Vireia splendens* Family: Melastomataceae *Miconia tetrandra* *Calycogonium squamosum* Order: Umbelliflorae Family: Araliaceae *Didymopanax morototoni* Subclass: Sympetalae Order: Ranales Family: Sapotaceae *Micropholis garcinifolia* Order: Oleales Family: Oleaceae *Lingue doningensis* Order: Solanales *Schwenkia heterophylla*

SHRUBS DOMINANT IN OPEN AREAS

Phylum: Spermatophyta Class: Dicotyledones Subclass: Sympetalae Order: Rubiales Family: Rubiaceae *Palicourea crocea* *Psychotria ber* Phylum: Pteridophyta Class: Filicinae Order:

Eusticales Family: Cyatheaceae *Alsophila phegopteris* *Cyathea arborea*

SHRUBS DOMINANT IN SHADY AREAS (WITH A CLOSED CANOPY)

Phylum: Spermatophyta Class: Dicotyledones Subclass: Polypetalae Order: Piperales Family: Piperaceae *Piper aduncum* *Floscopa peltata* Order: Urticales Family: Urticaceae Order: Sapindales Order: Myrtales Family: Melastomataceae *Miconia prasina* *Miconia tetrandra* *Miconia racemosa*

Table 2. Foraging status of invertebrate taxa in the rain forest at El Verde.

Foraging Taxon location: ARACHNIDA Amblypygi Phrynidae *Phrynus palmatus* Scorpionida Buthidae (1 sp.) Pseudoscorpionida Menthidae Menthidae Meropidae (1 sp.) Opiliones Gonyleptidae (1 sp.) Araneida Theraphosidae *Ctenophelis portorica* Dipluridae *Aceale spinosa* Barychelidae (1 sp.) Uloboridae *Miagrammopes pholcidae* *Mictonerys daley* *Modisimus montanus* Theridiidae (about 2 spp.) LIT, TD Araneidae *Leucauge regnum* *Grosehea* spp. *Tityus pertoricanus* Clubionidae (2 spp.) Anyphaenidae *Walia* co *W. macropalpus* Oxyopidae *Oxyopes* *Olios antiguana* *Olios portoricensis* (8 other spp.)

The corrected text:

Thomisidae "*Epicadus pulchellus*" wm, case e (or Tyssonanidae (1 p. me ww ae ui, wo wi wp wD UND

Foraging Taxon Location: Curtopoda Geophilomorpha Wenicopidae (1 sp.) ur Oryidae (1 sp.) ur Scolopendrenomorpha Cryptopidae (1 sp.) ur Scolopendridae *Scolopendra alter* DIPLOPODA Clomeridesnida Glomeridesmis *marmoreus** ut Polydesmida Cryptodesmidae *Liomus obscurus* Docodesis *maldon* Leptodesmidae Ricodesmidae *stejnieri** ur Spirobolida Spirobolidae *Microspirobolus richmondi* LIT Cambalidae Epinannolenidae *Epinannolene trinidadensis* LIT Chordeumatida Stemiulidae *Prostemmiulus heatwolus** ut Polyzonida Siphonophoridae *Siphonophora port* CRUSTACEA LIT, UND, CAN ur, wD ut' ut Podocopa (1 sp?)* sor, iT Subclass Copepoda (1 sp.?)* SOT, LIT Isopoda Oniscidae ut ur *Epilobocera situati* fron; ur Isopoda *Collembola* *Seinthuridae*

Foraging location: sot, Lit ut, wo (& other spp.) ur Neotomidae (2' spp.) ur Poduridae (2 sp.) ur *Microcoryphia* *Machilidae* (1 sp.) wo Odonata *Coenagrionidae* (1 sp.) wo *Aeshnidae* (3 spp.) USD, CAN *Libellulidae* (2 spp.) UND, CAN *Blattodea* *Blattellidae* '*Agaopteryx facies** ur, UND *Cariblattoida* *hebardi** mat, wD uit, WD *wheeleri* LIT, wb '*Dorlinguensis* Lit, wp x UT, wD *Plectoptera* *intulata* LIT, UND *Pseudosvapha* sp. Lar, wo Pon. sp. LIT, wo (about 6 other spp.) ur, wo *Orthoptera* *Tettigoniidae* vner ND, can *Mictocentrus triangulatum* UND, CAN *Turpilia rogosa** UND, CAN G other sp.) UND, CAN *Gryllacrididae* *elena* sp. Lar, wNp *oryltiaae* '*Azphiacusta* *caribeat* ur *Anaxipha* sp * wn, cay *Spharagemon muticus** ut *Ceuthophilus gundlachi* UND, aN *Laurepa krugii** UND, CAN *Gryllodes sigillatus* UND, CAN G. *vaginalis* UND, CAN *Orocharis* spp. (at least 4 others)* Lr, utp GE (at least 3 other spp.) LIT, UND *Phasmatodea* *Phasmatidae* *Lamponius portoricensis** ND, can Gbour @ other spp.) UND, CAN

Foraging Taxon Location: Mantodea Mantidae (1 sp.) sD, can Isoptera Termitidae Nasutitermes costalis ep, can Termites (2 other spp UND, CAN

Clyptoternes pubescens UND, Can Dermaptera Careinophoridae (1 sp.) LIT, UND, Can Labiidae (1 sp.) EXT, UND, Can Enbioptera Terateabiidae (1 sp.) UND, CAN Psocoptera Polypsocidae (1 sp.)* LIT, WD, CAN Epipsoeidae (3 spp.)* LIT, UND, CAN Procidae (2 spp.) Can Pseudocaeci Liigae (2 spp.) Psyllopsocidae (1 sp.) LIT, UND, Can Lepidopaoridae (1 sp) LIT, UND, Can Pachytroctidae (1 sp.) LIT, UND, CAN Liposcelidae (1 sp.)* LIT, UND, Can Thysanopeera Phioethripidae (at least 2 spp.)* LIT, UND, CAN Thripidae (8 species?) LAT, WD, CAN Neniptera Veliidae (2 spp.) NR, water surface Schizopteridae (1 sp.) LIT Dipsocoridae LIT Enteocephalidae (1 sp.) LIT, WD Phymatidae (1 sp.) WD Miridae (16 spp.) USP, Can Reduviidae 2 Ploiaria sp.* (other spp.) USP Nabidae (1 sp.) WD Lygaeidae (4 spp.) ND, Can Coreidae (1 sp.) SD, Can Aradidae (1 sp.) LIT Saldidae (1 sp.) shores of stream Cydnidae (1 sp.) LIT Pentatomidae (6 spp.) WD, Can Horoptera Ciendidae Borencona aguadilla Can

Foraging Tao Osatson Menbracidae (2 spp.) Can Cicadellidae Sibovea coffeacola WW, Xestocephalus sacu LIT, WD at least 15 other LAT, WD Cixiidae Bothesocer WD, Can Putalicia alt ND, Can F. supratta WD, Can Besaculata WD, Can Sartorelli ND, Can P. gabornt NP, Can G other spp. ND, Can Delphacidae Ugyops occidentalis WM, CRX G other spp. ND, Can Verbiidae WD, Can WN, Can ND, Can WW, Can ND, Can Arias WW, Can Other sp. WD, Can Tropicuchidae Ladella stali WW, Can (other spp.) WD, Can Flatidae Pecrusa torus WW, Can Kelorsesis magnas XD, Can (other spp) UND, Can Acanaloniidae (2 spp.) WD, Can Kinnaridae (1 sp.) WD, Can Peyllidae (5 spp.) WD, Can Diagpididae (3 spp.) LIT, Aphididae (2 sp.) WD, Neuroptera Coniopterygidae (1 sp.) WD Mantispidae (2 spp.) WD Menerodiidae (1 sp.) WD Chrysopidae (4 spp.) WD Ascalaphidae (1 sp.) WX Coleoptera Carabidae (1 sp.) LIT Nisteridae (1 sp.) LIT Silphidae (1 sp.) SOR LIT Peiliidae (at least 2 spp) LIT, UND, CAN

Taxon Staphylinidae (about 7 spp.)* Pselaphidae (about 4 spp.)*

Scydaenidae (1 species) Cantharidae (1 species) Lanpyridae Photinus (about 6 other species) Lycidae (about 4 species) Dermestidae (1 species) Ostomatidae (unknown species) Cleridae (1 species) Elateridae Dyrphorus Luninosus (Go other species) Throseidae (1 species) Daseillidae (at least 3 species) Prilodactylidae (at least 5 species) Rhizophagidae (1 species) Cevprophagidae (1 species) Cucujidae (at least 3 species) Phalacridae (1 species) Coccinellidae (at least 3 species) Fuglenidae (at least 2 species) Colydiidae (1 species) Oedeneridae (1 species) Mordellidae (1 species) Tenebrioniidae (1 species) Melandryidae (2 species) Anobiidae (2 species) Pasealidae (1 species) Scarabaeidae (10 species) Geranbycidae (14 species) Chrysonelidae (at least 3 species) Brentidae (1 species) Curculionidae (at least 9 species) Platypodidae (1 species) Scolytidae (at least 8 species) Lepidoptera Pieridae Disnorpha spio (other species)

Foraging Taxon Location Papilionidae (1 species) Satyridae (1 species) Heliconiidae (1 species) Nymphalidae (about 10 species) Lycaenidae (about 2 species) Hesperidae (about 5 species) Sphingidae (9 species) Ctenuchidae (7 species) Nolidae (1 species) Arctiidae (8 species) Noctuidae (60 species) Pericopidae (2 species) Notodontidae (4 species) Geosetridae (23 species)

Megalopygidae Megalopyge krugish Pyralidae Desmia tages Nargaronia elegans Sparagmia gigantalis (at least 60 other species) Thyrididae (3 species) Prerophoridae (5 species) Alucitidae (1 species) Olethreutidae (2 species) Tortricidae (2 species) Cossidae (1 species) Gelechiidae (at least 1 species) Ethmiidae (at least 1 species) Gracillariidae (at least 1 species) Acrolophidae (9 species) Tineidae (at least 1 species) Diptera Tipulidae (38 species) Psychodidae (27 species) Culicidae (9 species) Ceratopogonidae(34 species) Chironomidae (51 species)

Note: The locations for each species are not specified in the original text and several terms remain unclear.

I'm sorry, but the text you provided seems to be a list of various species, along with some codes, perhaps denoting locations or certain characteristics. It appears to be in a scientific context, possibly from an entomology or biology study. However, without more context, it's hard to understand what needs to be corrected or how to organize it. If you could provide more information or specify what you want to be corrected or fixed, I would be able to assist you better.

Taxon Soleolifera Veronicellidae (1 sp.) 'Archaeogastropoda Neritidae (1 sp.) Helicinidae (2 spp.) Mesogastropoda, Cyclophoridae Mepalostroms croceun* (other sp.) Pontatilidae (2 spp.) ADENOPHORA (any species) * SECERNENTEA (any species)* Foraging Loca *Major components of food web based on abundance and/or size.

Table 3. Vertebrates recorded from the El Verde Study Area.

Name Status

Class: Amphibia

Order: Salientia

Family: Bufonidae

Giant Toad (*Bufo marinus*)

Family: Leptodactylidae

Coqui (*Eleutherodactylus coqui*) abundant (40,000/ha)

Mottled Coqui (*E. eneidae*)

Tree-hole Coqui (*E. hedricki*)

Forest Coqui (*E. portoricensis*)

Ground Coqui (*E.*)

Fringed Coqui (*E. wightmanae*)

White-Tipped Frog (*Leptodactylus albilabris*)

Class: Reptilia

Order: Squamata

Suborder: Lacertilia

Family: Gekkonidae

Upland Gecko (*Sphaerodactylus klauberi*)

Common Dwarf Gecko (*S. macrolepis*)

Green Anole (*Anolis evermanni*)

Puerto Rican Giant Anole (*A. cuvieri*)

Yellow-bearded Anole (*A. gundlachi*) abundant (2,000/ha)

Pigmy Anole (*A. occultus*) rare

Spotted Anole (*A. stratulus*) abundant (25,000/ha)

Family: Anguidae

Culebra de Cuatro Patas (*Diptoglossus pleei*)

Family: Amphisbaenidae

Culebra Ciega (*Amphisbaena*)

Suborder: Serpentes

Family: Boidae

Puerto Rican Tree Boa (*Epicrates inornatus*)

Family: Colubridae

Ground Snake (*Alsophis portoricensis*)

Class: Aves

Order: Falconiformes

Family: Accipitridae

Red-tailed Hawk (*Buteo jamaicensis*)

Broad-winged Hawk (*Buteo platypterus*)

Sharp-shinned Hawk (*Accipiter striatus*) rare

Order: Columbiformes

Family: Columbidae

Red-necked Pigeon (*Columba squamosa*) abundant

Zenaida Dove (*Zenaida aurita*)

Ruddy Quail-Dove (*Geotrygon montana*) rare

Order: Psittaciformes

Family: Psittacidae

Puerto Rican Parrot (*Amazona vittata*) rare

Order: Cuculiformes

Family: Cuculidae. Puerto Rican Lizard Cuckoo (*Saurothera vieilloti*). Order: Strigiformes. Family: Strigidae. Puerto Rican Screech Owl (*Otus nudipes*). Order: Apodiformes. Family: Trochilidae. Puerto Rican Emerald (*Chlorostilbon maugaeus*), Green Mango (*Anthracothorax viridis*), rare. Order: Coraciiformes. Family: Todidae. Puerto Rican Tody (*Todus mexicanus*), abundant. Order: Piciformes. Family: Picidae. Puerto Rican Woodpecker (*Melanerpes portoricensis*). Order: Passeriformes. Family: Tyrannidae. Stolid Flycatcher (*Myiarchus stolidus*), rare. Loggerhead Kingbird (*Tyrannus caudifasciatus*), rare. Family: Mimidae. Pearly-eyed Thrasher (*Margarops fuscatus*). Family: Turdidae. Red-legged Thrush (*Mimocichla plumbea*). Family: Vireonidae. Puerto Rican Vireo (*Vireo latimeri*), rare. Black-whiskered Vireo (*Vireo altiloquus*), abundant. Family: Parulidae. Black and White Warbler (*Mniotilta varia*). Parula Warbler (*Parula americana*). Cape May Warbler (*Setophaga tigrina*). Black-throated Blue Warbler (*Setophaga caerulescens*). Prairie Warbler (*Setophaga discolor*). Worm-eating Warbler (*Helmitheros vermivorum*), rare. Ovenbird (*Seiurus aurocapilla*). Northern Waterthrush (*Parkesia noveboracensis*). American Redstart (*Setophaga ruticilla*). Family: Coerebidae. Bananaquit (*Coereba flaveola*), abundant. Family: Thraupidae. Blue-hooded Euphonia (*Euphonia musica*), rare. Stripe-headed Tanager (*Spindalis zena*). Puerto Rican Tanager (*Nesospingus speculiferus*), abundant. Family: Icteridae. Black-cowled Oriole (*Icterus dominicensis*), rare. Family: Fringillidae. Puerto Rican Bullfinch (*Loxigilla portoricensis*).

Class: Mammalia. Order: Chiroptera. Family: Phyllostomatidae. Greater Antillean Long-tongued Bat (*Monophyllus redmani*). Jamaican Fruit Bat (*Artibeus jamaicensis*), abundant. Yellow-shouldered

Bat (*Sturnira lilium*). Brown Flower Bat (*Erophylla sezekorni*). Order: Rodentia. Family: Muridae. Black Rat (*Rattus rattus*), abundant. Order: Carnivora. Family: Herpestidae. Small Indian Mongoose (*Herpestes auropunctatus*).

*Common and scientific names from Philibostan and Yntema (1977), Woolbright and Stewart (personal communication 1982).

Sturner and Gist (1970) listed the species as endangered in the U.S. and Puerto Rico. The scientific names were derived from Sconnon and Eond's work in 1971. According to Sprecher (1970), the species is a summer resident and a winter resident.