DARTMOUTH STUDIES IN TROPICAL ECOLOGY 1997

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and
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Editors

Department of Biological Sciences
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Disclaimer: Authors of all papers were listed alphabetically.

1997 Dartmouth Biology Foreign Study Program Participants

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David R. Peart
Richard T. Holmes

Acknowledgments

Immersion in the tropical ecosystem in so thorough and exciting a fashion, as is possible on the Dartmouth Biology Foreign Study Program, is due to the hard work of many extraordinary people. We are greatly indebted to our professors, David Peart, Richard Holmes and Celia Chen, for challenging our minds and becoming our friends. We thank David for tackling the boa, for getting our noses wet with tree sap, for finding ecological significance in the experiments we did, and for staying one step ahead of us on our hikes and in our analyses. We thank Dick for introduction us to the fascinating world of birds, for joining our fireside chat on the beach in Corcovado, for correcting our revised and rerevised papers late into the night, and for maintaining high academic expectations when our thoughts strayed towards swimming and monkey watching. We also thank Celia for doing such a terrific job in her first year leading the Jamaican portion of the program. We are grateful to her for organizing our dives, for allowing us an extra hour of sleep, for teaching us how to breathe air, not water, through our snorkels, and for her encouragement and helpful suggestions during all of our underwater data collection nightmares.

The foreign study program could not possibly have gone so smoothly without the logistical savvy of the Organization for Tropical Studies. At each field station that we visited, we were greeted by friendly, informed staff and by the sweet smells emanating from the kitchen. We thank the field station managers and naturalists, who enriched our knowledge of the local environment. Special applause goes to Nicole and Mauricio for sharing with us the magic of Palo Verde during our very first days in Costa Rica. Thanks to the bus, boat and tractor drivers for giving us some of the most thrilling, sometimes stomach churning, rides of our lives. We are also most grateful to our cooks for keeping our stomachs happily filled with fresh fruits, fabulous beans and CheeKee cookies.

Last but least of all least, we thank our graduate teaching assistants. Scott Zens, Brian Kennedy and Craig Layne really made the studies that follow in this book possible. They were our reference for questions on experimental design, data analysis and interpretation. They caught us frogs, joined us on swimming expeditions, and sent us bushwhacking deep into the jungle. We cannot thank them enough for their hours and hours of hard work. Scott was an expert in statistics, herbivory, transects and the late night scene of San Jose. Brian introduced us to fascinating beetles and kept us laughing about all of our adventures and misadventures. Craig, among other things, organized our equipment, a scorpion joust, and all of our computer files.

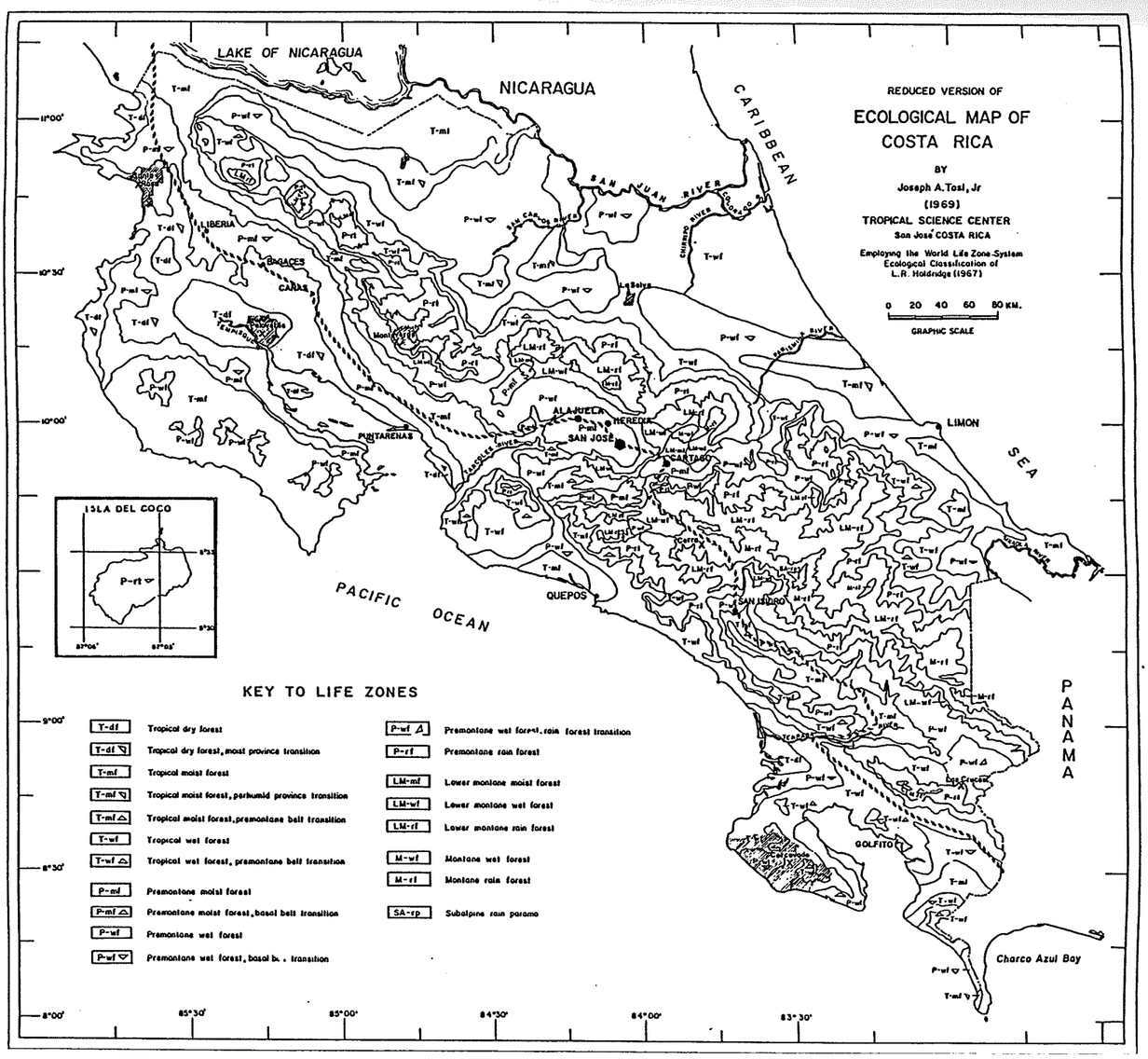
Among all the memories we have of this extraordinary foreign study program, we will best remember the people who made it happen.

SCHEDULE FOR DARTMOUTH'S TROPICAL BIOLOGY PROGRAM - COSTA RICA 1997

		Morning	Afternoon	Evening
6 Jan	To San Jose	Travel	Travel	Arrive in evening
7 Jan	In San Jose	Serp, INBIO, OTS	Shop. etc.	Dinner in SJ
8 Jan	To Palo Verde	Travel	Orientation	Lec: CR ecology
9 Jan	At Palo Verde	Orientation	20 Questions	Lec: Forest dynamics
10 Jan	At Palo Verde	FP - 1 (ant-acacia)	Stat lab	Data analysis
11 Jan	At Palo Verde	FP - 2	Plant lab	FP-1 reports
12 Jan	At Palo Verde	FP - 2	Vertebrate lab	Lec: Plant-herbivore
13 Jan	At Palo Verde	SIFP - 1	Insect lab	FP-2 reports
14 Jan	At Palo Verde	SIFP - 1	SIFP - 1	Lec: History & origins
15 Jan	At Palo Verde	Comp. Project	Data analysis	Lec: Biogeochemistry
16 Jan	At Palo Verde	Recon.	Data analysis	SIFP-1 reports
17 Jan	To Santa Rosa	Travel/walk	Orientation	Disc: Sea turtle biology
18 Jan	At Santa Rosa	Field (mangroves)	Field	Field
19 Jan	To Monteverde	Walk	Travel	Discussion
20 Jan	At Monteverde	Orientation	Orientation	Lec: Pollination/dispersal
21 Jan	At Monteverde	Project planning	SIFP - 2	Data analysis/writing
22 Jan	At Monteverde	SIFP-2	SIFP-2	Lec: Social insects
23 Jan	At Monteverde	Comp. Project	Data Analysis	SIFP-2 reports
24 Jan	At MV, to SJ	Recon.	Travel to SJ	free
25 Jan	In San Jose	Lec: env. issues?	free	free
26 Jan	To Cerro	Travel/Cerro	Orientation	Discussion
27 Jan	At Cerro	Orientation	Proj. planning	Lec: Trop agriculture
28 Jan	At Cerro	SIFP-3	SIFP-3	Data analysis
29 Jan	At Cerro/LaPalma	Comp. project	Travel to LaPalma	free
30 Jan	To Corcovado	Walk/orientation	Walk/orientation	Discussion
31 Jan	At Corcovado	Orientation	Orientation	SIFP-3 reports
1 Feb	At Corcovado	Comp. project	SIFP planning	Lec: Primate ecol & beh
2 Feb	At Corcovado	FP-3 (leaf cutters)	Data analysis	Lec: Coevolution
3 Feb	At Corcovado	SIFP-4	SIFP-4	FP-3 reports
4 Feb	At Corcovado	SIFP-4	SIFP-4	Data analysis
5 Feb	At Corcovado	Net/recon.	SIFP-4	Lec: Trop. bird ecology
6 Feb	At Corcovado	Recon/net.	Data analysis	SIFP-4 reports
7 Feb	CV to Las Cruces	walk	travel	Discussion
8 Feb	At Las Cruces	orientation	Plant taxonomy	Lec: Conserv. issues
9 Feb	At Las Cruces	Plant field proj.	Report writing	Reports
10 Feb	Las Cruces/to SJ	Travel to SJ	free	free
11 Feb	To La Selva	Travel/Poas NP	Orientation	Lec. LaSelva (B.Young)
12 Feb	At La Selva	Orientation	Project planning	Lec: Bird soc. behav.
13 Feb	At La Selva	SIFP-5	SIFP-5	Lec: Trop. aquatic systems
14 Feb	At La Selva	SIFP-5	Data analysis	SIFP-5 reports
15 Feb	At La Selva	Comp proj	Data analysis	Report writing
16 Feb	At La Selva	SIFP-6	SIFP-6	Comp proj. reports
17 Feb	At La Selva	SIFP-6	Data analysis	SIFP-6 reports
18 Feb	to Portico	Field trip to rainforest project (Portico)		Report writing
19 Feb	to San Jose	Reconnaisance	Travel	Dinner in SJ
20 Feb	Depart for Jamaica			

Orientation = becoming acquainted with new site
Reconnaisance = time to explore site
Initials after lectures = student paper critiques

SIFP = student initiated field problems
FP = field problems


REDUCED VERSION OF
ECOLOGICAL MAP OF
COSTA RICA
BY
Joseph A. Tosi, Jr
(1969)
TROPICAL SCIENCE CENTER
San José COSTA RICA
Employing the World Life Zone System
Ecological Classification of
L.R. Holdridge (1967)
0 20 40 60 80 KM.
GRAPHIC SCALE
LAKE OF NICARAGUA
NICARAGUA
CARIBBEAN
SEA
PACIFIC OCEAN
PANAMA
SAN JUAN RIVER
LIBERIA
BAGACES
CAÑAS
PUNTARENAS
ALAJUELA
HEREDIA
SAN JOSE
CARTAGO
LIMON
QUEPOS
GOLFITO
Charco Azul Bay
ISLA DEL COCO
KEY TO LIFE ZONES
T-dt Tropical dry forest
T-dt Tropical dry forest, moist province transition
T-mt Tropical moist forest
T-mt Tropical moist forest, perhumid province transition
T-mt Tropical moist forest, premontane belt transition
T-wt Tropical wet forest
T-wt Tropical wet forest, premontane belt transition
P-mt Premontane moist forest
P-mt Premontane moist forest, basal belt transition
P-wt Premontane wet forest
P-wt Premontane wet forest, basal belt transition
P-wt Premontane wet forest, rain forest transition
P-rt Premontane rain forest
LM-mt Lower montane moist forest
LM-wt Lower montane wet forest
LM-rt Lower montane rain forest
M-wt Montane wet forest
M-rt Montane rain forest
SA-rp Subalpine rain paramo
11°00'
10°30'
10°00'
9°00'
8°30'
8°00'
85°30'
85°00'
84°30'
84°00'
83°30'