

APPENDIX S1. Documentation required for effective use of the PiCUS 3 Sonic Tomograph. (A) Collection spreadsheet. Photographs of trees showing (B) location of scanning points, (C) status category codes, and (D) examples of tree associates and diseases.

A. Spreadsheet for collecting visual and scanning data in the field.

Date:	<input style="width: 100%;" type="text"/>	Species:	<input style="width: 100%;" type="text"/>
Location:	<input style="width: 100%;" type="text"/>	Tag#:	<input style="width: 100%;" type="text"/>
		People:	<input style="width: 100%;" type="text"/>

<i>Measurement</i>	<i>Number of points</i>
DBH (mm):	# for Geometry:
Circumference (mm):	# for Sonic:
Perimeter (mm):	Circumf/#points:
Nail # South Side:	
Nail #s on main axis:	

Photos for documentation

<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>	<input style="width: 100%;" type="text"/>
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Observation

Tree status observations	Tree Status:	<input style="width: 100%;" type="text"/>
	Associates:	<input style="width: 100%;" type="text"/>

S=apparently healthy; H=trunk hollow; Y=trunk fallen with roots exposed; Q=trunk snapped; DC=dead fallen; DS=dead standing
N=none; F=fungi; H=ants; C=termites; L=lianas/epiphytes

Symptoms/signs of disease (yes/no)?

Observations:	
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Scan indicates decay (yes/no)?

Observations:	
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Wood collected (yes/no)?

Observations:	
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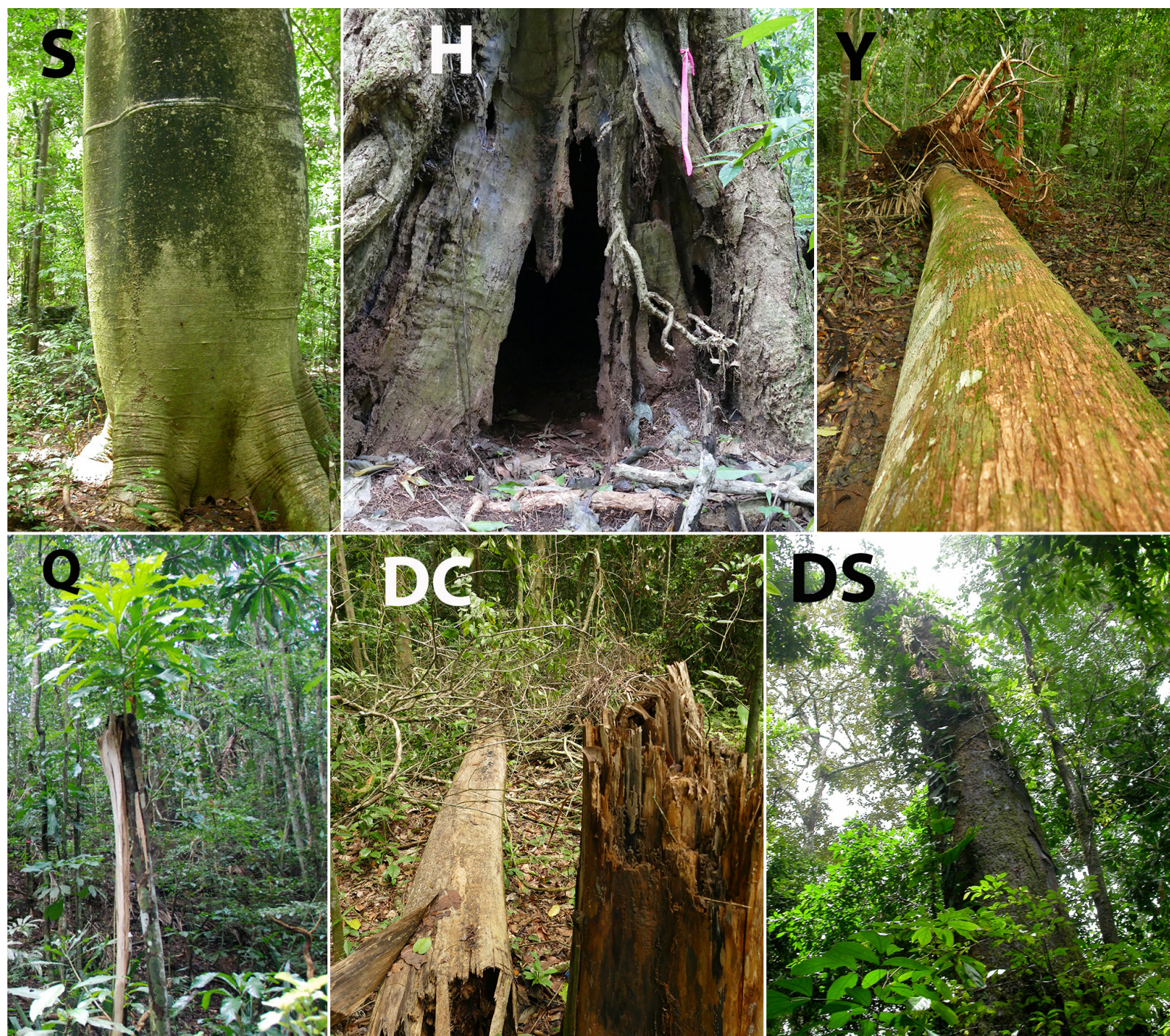
Fungus collected (yes/no)?

Observations:	
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B. Three images of the tree *Trichilia tuberculata* (plot tag 3792) from roughly south, northeast, and northwest of the trunk, showing the location of scanning points (black numbered tags) labeled in relation to trunk features.



C. Examples of the tree status categories. S = Apparently healthy tree. H = Hollow trunk on live tree. Y = Tree fallen with exposed roots, but alive (i.e., with green leaves). Q = Tree snapped, but alive (here, resprouting from stump). DC = Dead fallen. DS = Dead standing.



D. Examples of tree associates, disease signs, and symptoms for inclusion on the data sheet. (A) Basidiomata (reproductive bodies) of wood decay fungus (associate code F). (B) Canker on trunk of tree (a symptom). (C) Exudate associated with sunken lesion (a symptom). (D) Liana wrapped around the trunk (associate code L). (E) Epiphytic climber on trunk (associate code L). (F) Termite trail on trunk (associate code C) passing through thick mat of epiphytic moss and liverworts (associate code L). (G) Nest of *Azteca* ants (associate code H). (H) Root-rot decay on exposed roots on tree with status code Y (a symptom). (I) Wound crack in trunk (a symptom), with hollow inside (status code H).

