Fruit production was observed annually by counting fruits on the ground, which fall synchronically at the start of the wet season (~February). The samples of reproductively mature trees were selected in a stratified manner, to ensure a representation of tree sizes. Brazil nut trees in the two study sites naturally occur at densities of 1.35-1.82 trees per ha, and trees with overlapping crowns were excluded from selection so that fruit fall could be unambiguously attributed to a single tree. Tree diameter at breast height (1.3 m above ground level; DBH) was assessed annually. Three crown attributes of each sample tree were assessed once during the study: (1) Crown position was categorized as (a) Dominant (full overhead and side light), (b) Co-dominant (full overhead light), and (c) Intermediate (some overhead or side light) or (d) Suppressed (no direct light); (2) Crown size (m2) was estimated from radii measured in four cardinal directions for trees with regular crowns, and with 8 cardinal directions for trees with irregular crowns, using an ellipsoid formula; and (3) Crown form was categorized as: (a) Good, (b) Tolerable, or (c) Poor. Using a high-accuracy geodesic GPS unit, tree location and elevation were also noted. Competition from neighboring trees was evaluated in 2018, using the Bitterlich method, whereby competing trees were selected through evaluation of their size and distance from each subject (*B. excelsa*) tree. Using a prism with a 2.3 m2/ha basal area factor, we measured the DBH of all competing trees. For each tree, we calculated the basal area and number of competitors >30 cm DBH. In 2010, sapwood data were collected using a standard 5-mm increment borer at 1.3 m height, extracting two perpendicular cores ~150mm in length per tree. Each core was visually cross-dated, and the sapwood area (cm2) was calculated.