

RAINFOR – Liana Field Work Database Codes

FLAG 1: ALIVE STATUS (If the liana is dead, write “0” in this column)

- a=** Alive normal, should be used by itself unless liana is a recruit.
- b=** Alive, broken stem/top & resprouting, or at least live phloem/xylem. Write in the comments column at what height the stem is broken.
- c=** Alive, leaning by $\geq 10\%$. The leaning code cannot be used with the fallen code 'd'.
- d=** Alive, fallen (e.g. on ground).
- e=** Cabled.
- f=** Alive, hollow.
- g=** Alive, rotten.
- h=** Multiple stemmed individual, i.e. two or more stems $>99\text{mm}$ at maximum diameter, branching below 1.3m height. Each stem $>99\text{mm}$ gets a number. Should be used with other code - e.g. if a liana is leaning and with multiple stems use 'ch'.
- i=** Alive, no leaves, few leaves
- j=** Alive, burnt
- k=** Alive, snapped $< 1.3\text{m}$ (therefore the diameter at 1.3m is 0mm).
- l=** Alive, itself has liana $\geq 10\text{cm}$ diameter on stem or in canopy.
- m=** Itself covered by lianas. Use where canopy is at least 50% covered by lianas, even if no individual liana reaches 10cm diameter.
- n=** New recruit. Always use with another code- e.g. if liana is normal and new then use the code 'an', if liana is broken and a new recruit the code is 'bn'.
- o=** Lightning damage
- p=** Cut
- q=** Peeling bark (bark loose/flaking)
- s=** Has a strangler.
- u=** Elliptical.
- z=** Alive, declining productivity (nearing death)

Note: *Liana Alive Status Codes* can be used together in any combination. The only exceptions are codes 'a', 'c' and 'd'. Please read the notes when using these codes!

Main Host Status:

- 1=** Climbs living host in plot
- 2=** Climbs dead host in plot
- 3=** Climbs living host outside plot
- 4=** Climbs dead host outside plot
- 5=** Climbs tree $< 10\text{cm}$ diameter
- 6=** Does not climb any tree

Note: Record the “*Main Host*” Tag Number in the “Main Host” column. If the “Main Host” is outside the plot, record this information in the comments section.

FLAG 2: MODE OF DEATH (If the liana is alive, write “1” in this column)

All dead lianas have two or three letter codes.

1) Physical mechanism of mortality (How the liana died)

- a=** Standing
- b=** Broken (snapped stem)
- c=** Fallen
- d=** Standing or broken, probably standing (not uprooted)
- e=** Standing or broken, probably broken (not uprooted)
- f=** Standing or broken (not uprooted)
- g=** Broken or uprooted, probably uprooted
- h=** Broken or uprooted, probably broken
- i=** Broken or uprooted (not standing)
- k=** Vanished (found location, liana looked for but not found)
- l=** Presumed dead (location of liana not found e.g. problems, poor maps, etc.)
- m=** Unknown

2) Number of woody stems in Mortality event

- p=** Died alone
- q=** Died with Host
- r=** Unknown

3) Killed or killer process

- j=** Anthropogenic
- n=** Burnt
- o=** Lightning
- s=** Unknown whether killed or killed
- t=** Died with host that the liana killed
- u=** Died with host tree, no more information.
- v=** Died with host that died broken.
- w=** Died with host tree that died uprooted
- x=** Died due to fallen branches of dead host tree
- y=** Died due to fallen branches of living host tree
- 4=** Killed by strangler / liana competition [liana died standing]
- 5=** Fell from living, undamaged host tree

Note: Select one code from each category. For example a dead liana that is fallen, died alone and was killed by branches from a living host tree would be 'cpy'.

For multiple deaths the numbers of lianas that died should be recorded and written in the **comments column**.

For broken liana the height at which the breakage occurred should be recorded in the **comments column**.

Flag 3: MEASUREMENT TECHNIQUE

For each diameter type

- 0= Normal measurement, tape measurement
- 3= Estimate
- 5= Unknown
- 6= Caliper
- 7= Geometric Mean (Max, min dimensions)

Flag 4: POST-FIELD DATA MANAGEMENT

For each diameter type

- 0= Normal measurement, no retrospective modification
- 1= Extrapolated from measures of same diameter type
- 2= Corrected expected typographical error
- 3= Interpolated from measures of same diameter type
- 4= Estimated using median growth rates
- 7= Zero growth rate assumed
- 8= Another transformation, see notes/ not clear what was done
- 9= Extrapolated using ratio of diameters from later census
- 10= Extrapolated using mean ratio of diameters for taxon

Note: Only one measurement technique and one data post-field data management (Flag 4) code should be selected each liana and each diameter should have a measurement technique and diameter type.

Comments: Everything else!