

## 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!