Field Checklist 2: Monitoring Trap Tree Plots (TTP)

- **Purpose**
  - After poisoning, each trap tree should be examined up to 3 times (approx. late January, March and at felling) to assess tree crown vigour, signs of sirex attack and ips bark beetle activity. This assists in gauging the effectiveness of the trap tree.

- **For all monitoring tasks, including the final one at felling, use the Bio-web App to record this task as prompted,** or if the App is not available, record on 'Worksheet 2'.

- **On the Bioweb App:**

  For each tree, navigate to the relevant Foliage Assessment page and complete the fields systematically. Use the following codes within the drop-down menus:

  - **Foliage assessment** (upper and lower for each tree in the TTP. Divide the crown in half visually and assess each half separately.)

Green (G):	all needles green
Green/Yellow (G/Y):	green and yellow needles present within crown.
Yellow (Y):	all needles yellow
Red/Brown (B):	predominantly brown/red needles, retained
Dead Grey (D):	all needles grey, drooping & needle cast.

Note: Dead Grey needles and/or needle cast can be caused by canopy closure (especially in lower crown).

  - **Signs of sirex** (record singular or combination of signs)

Resin Beads (R):	Fine 'pin-like' resin flows or fine hollow beads
Sirex stain (S):	Tea-staining (in the wood beneath the bark) usually accompanied by visible oviposition holes.
Ovipositing (O)	Observed sirex or parasitoid ovipositing into tree.
Galleries (G):	Visible frass filled sirex galleries within the wood. Note: These will only be seen during the felling and inoculation phase. If the tree was struck in a previous season then exit holes will be visible on the stem and should be scored as G.
Larva (L):	Larvae visible in cut surfaces of tree. (These will only be seen during the felling and inoculation phase.)

  - **Ips bark beetle <u>severity</u>** (based on frass expulsion)

0. Nil (No frass detected)

1. A little: hard to find – only a small quantity of frass or holes detected in 1 or 2 spots on the stem

2. Moderate amount: easily found - frass sites and or holes scattered over stem

3. Lots: bark 'peppered' with entry/exit holes with prolific quantities of frass on stem and ground directly below

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- **On Worksheet2:** (Source the current version from the 'Sirex Management Strategy and Operations Worksheets', on NSCC website: http://australiansirex.com.au)
    - Record the plot details and, in the first column, date trees poisoned, the crew and the poison rate (number of injection holes), then at subsequent assessments (in the following columns) record:
        - Date and crew assessing
        - Using the relevant codes, complete upper and lower crown foliage colour assessment, ips abundance score and note any sirex signs (leave blank if nothing seen)
        - **Note:**
            - Bluestain is scored at the time of cutting billets (see Checklist 4. Billet Collecting Procedure - Sirex Trap Tree Plots)
            - Sirex Exit Holes is assessed 12 months after inoculation to determine how many sirex were attracted to the tree.

Sample foliage assessment scores:
Tree 1 G/B Tree 2 G/Y Tree 3 B/GY Tree 4 GY/GY Tree 5 B/GY Tree 6 G/B

Fine 'pin-like' resin flows or fine hollow beads on stems of sirex struck trees

Sirex 'tea stained' oviposition sites (beneath bark)

***Ips* bark beetle frass (frass is the same colour as inner bark) – Score=3**

Female sirex ovipositing into tree