

# Hoverfly Lagoons in tree stumps

## Forest operations and guidance for stump rot hole creation

**Aim:** Create habitat for semi-aquatic hoverflies using felled tree stumps

**Method:** Refrain from using chemical treatment on stumps. Create rot holes by boring into stumps using a chainsaw or drill. Retention of water is vital; optimised by boring into the heartwood centre only.

**Drill-boring rot holes:** Using a 25mm auger bit, bore repeatedly into the stump resulting in a 15 cm deep cavity, fill with sawdust created in the boring process and partially cover (with e.g. bark) to protect the content from evaporating while allowing rainwater to fill the cavity.

	Specifications (cm)
Stump Height	30 to 60
Stump Width	> 25
Hole Width	10 x 10
Hole Depth	15



**Chainsaw-boring rot holes:** Make two parallel, 15cm deep cuts into the surface of the stump positioned either side of the heartwood centre ~15 to 20 cm apart. Make two further 45° angle cuts, perpendicular to and connecting the initial cuts to complete a square on the surface boring out a triangle-shaped wedge. Fill the cavity with sawdust created in the boring process, and place inverted triangle wedge partially over the hole.



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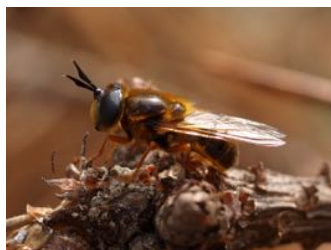


**Distribution and supplementation:** Habitat creation should ideally be annually (10 to 20 holes bored) to account for holes that don't retain water, and attempts should be made to link up and create continuous areas of habitat.

**Identification and biology:** Aquatic hoverfly larvae typically have a long breathing tube, which they telescopically extend to breathe while feeding on microbes deeper in the hole. They can be found all year round; larvae overwinter and can have up to three generations per year, depending on the species.



*Helophilus pendulus*



*Callicera rufa*



*Myathropa florea*



*Eristalis sp.*

### References and information sources

- Rotheray, E.L., MacGowan, I. 2015 'Pine Hoverfly' Version 1.0. In: *The Species Action Framework Handbook*, Gaywood M.J., Boon P.J., Thompson D.B.A., Strachan I.M. (eds). Scottish Natural Heritage, Battleby, Perth.
- Rotheray E.L. 2010 'Restoring the endangered pine hoverfly in the UK' In: Soorae, P.S. (ed.), *Global Re-introduction Perspective: IUCN/SSC Re-introduction Specialist Group & Environmental Agency* 21-24.
- Malloch Society Website: [www.mallochsociety.org.uk/blera-2006-status](http://www.mallochsociety.org.uk/blera-2006-status)
- UK Hoverfly Larval Group page: [Facebook](https://www.facebook.com/ukhoverflylarvalgroup)