

- Natural Control
of
Douglas-fir
Beetle

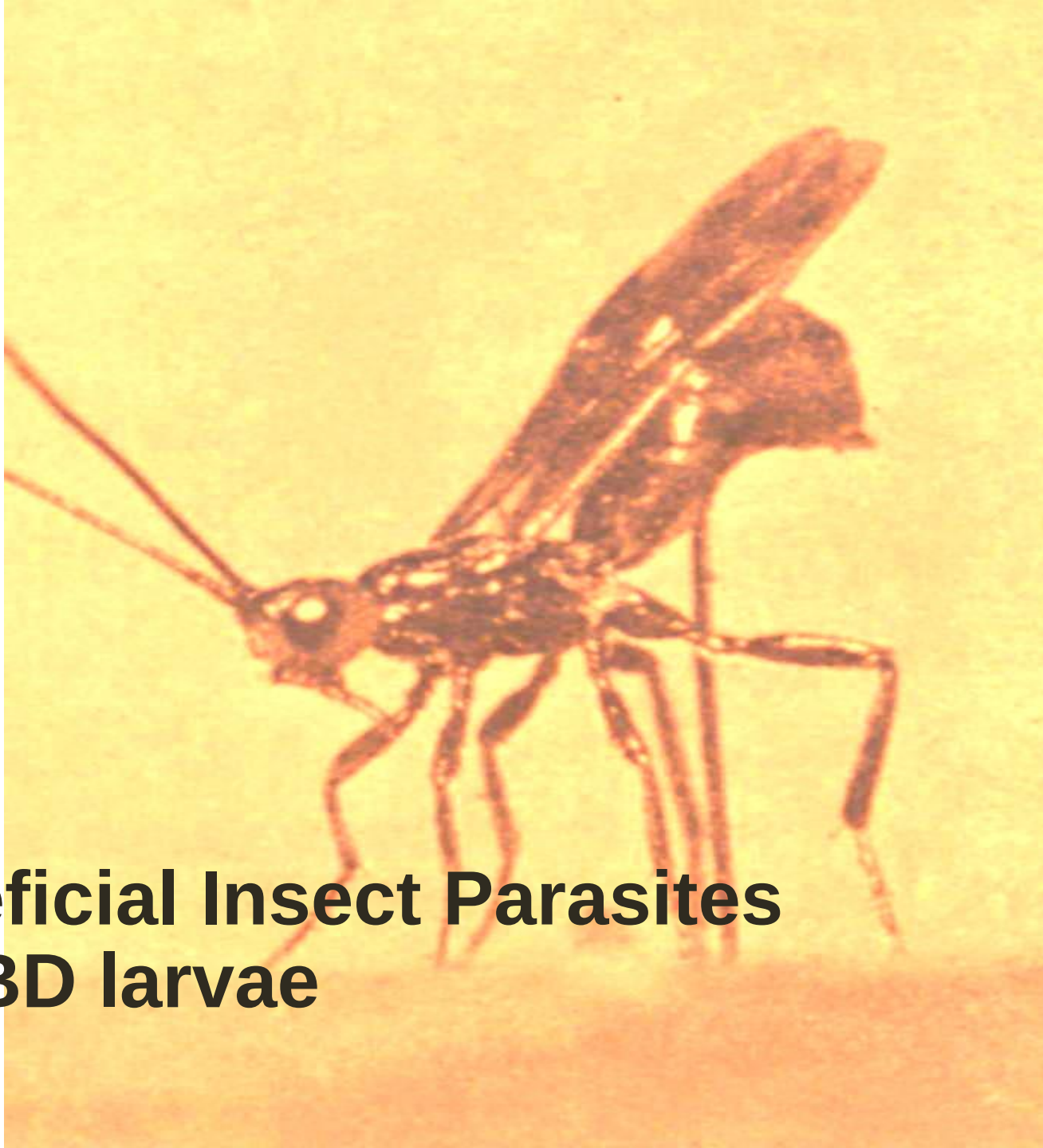
Pitchout: the tree's main line of defence: resin flow to drown the attacking beetles eg. Resin Pitch out of the beetle





Woodpeckers
and other
beneficial
birds are
effective
predators of
beetles

**Beneficial Insect Parasites
kill IBD larvae**





Parasitized
Douglas-fir
Beetle Larvae

Predators

checkered
beetles & other
beneficial
predators help
kill beetles



Weather:

Cold Kills Beetles

- 40 C for 3 weeks**

Combined natural factors kill beetles
and help keep Douglas-fir beetle in
a natural balance:

cold weather

resin flow and pitch-outs

insect predators

insect parasites

diseases

birds