

*Wm. Wheat & Son*

THE FLOWER & GARDEN CENTRE

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## Gardeners Guide to: Leatherjackets (*Tipula species*)

**Symptoms:** Lawns develop yellow patches during the spring and summer months where the grass has died as a result of leatherjackets eating the roots. In late summer large numbers of the adult daddy-longlegs or crane flies may be seen in the garden. Brown pupal cases may be seen protruding from the lawn where adult flies have emerged.

**Biology:** Adult crane flies of the species that damage lawns mainly emerge in late summer and early autumn. The females deposit eggs in the turf and these hatch in the autumn and begin feeding on grass roots. In cold winters little feeding or development takes place and so signs of damage may not be seen until the summer. However, mild winters can allow the grubs to develop over winter and sometimes cause damage in late winter or early spring. The larvae are greyish-brown and up to 45mm long when fully grown. The larvae have no legs or obvious head and they have a tough, leathery outer skin. Heavy rain and waterlogged soil conditions can drive large numbers of leatherjackets out of the soil and on to paths and patios, where they may cause alarm. Leatherjackets complete their feeding during the summer and pupate in the soil. Before the adult fly emerges, the pupa wriggles half out of the soil, so the brown pupal case is left sticking out of the turf.



**Control:** Damaging infestations are more likely to occur after a wet autumn, as damp conditions increase the survival of eggs and young larvae. A dry autumn may result in few leatherjackets, even if large numbers of adult flies were seen in the garden. Leatherjackets and adult crane flies have many natural enemies, such as starlings and other birds, spiders and parasitic insects, that help to limit their numbers.

As of August 2006 a chemical control 'Provado Lawn Grub Killer' (imidacloprid) is now available. This is applied once a year in the autumn during the egg laying period to control the larvae stage as it emerges and starts to feed on the roots. One application lasts all season and also gives control of chafer grubs which hatch in the spring and cause similar damage to the lawn. The chemical is applied by watering can at a rate of 30g per 100m<sup>2</sup> (£12.99) and then watered in gently to wash it down into the root zone where it remains active for up to 6 months. There is no need to exclude pets and children from the lawn once dry however it is best not to let rabbits or guinea pigs eat the grass for 4 weeks after application.

An alternative treatment is to water a pathogenic nematode, *Steinernema feltiae* into the turf. The microscopic nematodes enter the bodies of leatherjackets and infect them with a fatal bacterial disease. If it is to be effective, the nematode needs to be applied while the soil is moist and the soil temperature is in the range of 12-20°C (54-68°F). The ideal time is in early autumn before the weather has turned cold. On small lawns, leatherjackets can be encouraged to come up to the surface where they can be collected. This is done by covering the turf with black polythene or some other light-impermeable material. This should be done when the soil is moist and leatherjackets are feeding close to the surface. Leave the cover on overnight, then in the morning peel it back in stages and collect any leatherjackets that are exposed. Do not uncover too big an area as leatherjackets will soon crawl back into the turf when exposed to daylight.