JAPANESE BEETLE

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Description — The adult beetle is 1/3 to 1/2 inch long. It is shiny, metallic green or greenish bronze with reddish wing covers and two white spots at the tip of the abdomen. Along each side of the abdomen are several smaller white spots. (Fig. 1). The eggs are pearly white, about 1/3 the size of a pinhead. The larvae or grubs are white, but may appear gray due to ingestion of soil. The most distinguishing characteristic for indentification of the Japanese beetle larvae is the row of "V" shaped spines on the underside of the tip of the abdomen that can easily be seen with a hand lens. The bottom of the "V" points towards the head end of the larvae. (Fig. 2).

Life Cycle — The Japanese beetle has a one year life cycle about 10 months being spent as a grub in the soil. It winters as a partly grown grub and completes its growth during June when it transforms into the pupae stage. The first adults emerge during late June or early July. Adults are present the remainder of the summer. On golf courses they feed on foliage and fruits of many trees, shrubs and flowering plants. During this time — from late June until early September — the beetles deposit eggs two to six inches deep in the soil. The newly hatched grubs feed first on decaying vegetable matter and later on the roots of grasses and other plants. When the soil cools in late October and early November, the grubs become inactive and do not feed until the following spring. (Fig. 3).

Damage — Japanese beetles destroy the leaves, blossoms, and fruits of more than 276 plants. These beetles completely skeletonize leaves, leaving only the veins intact. They are particularly damaging to peaches, grapes and the fruits of many other cultivated plants. The grubs feed on the roots of grasses and cereal crops. They can seriously injure grass sods in lawns, parks, cemeteries and **golf courses.**

Control — Adult beetles: DDT, carbaryl (sevin), methoxychlor, malathion. Follow label directions for exact rates.

Larvae (grubs): One application of chlordane (20 oz./10,000 sq. ft.) soaked into the soil with plenty of water.

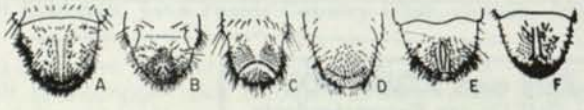

Fig. 2 Terminal abdominal segments of the larvae of six species of "White grubs," ventral surface, showing the features by which the different species may be distinguished from each other. A, the oriental beetle, Anomala orientalis; B, the Japanese beetle, Popillia Japonica; C, the Asiatic garden beetle, Autoserica castanea; D, the annual white grub, Ochrosidia villosa; E, one of the native white grubs with a 3-year cycle, Phyllophaga hirticula; and F, the European chafer, Amphimallon majalis. All enlarged about three diameters. (Redrawn from Conn. and N. J. Agr. Exp. Sta. publications.)

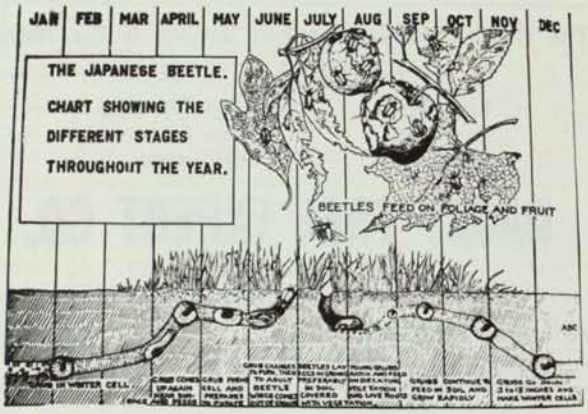

Fig. 3. Diagram of the life cycle of the Japanese beetle, Popillia japonica. (From Pa. Agr. Bul. 390.)