



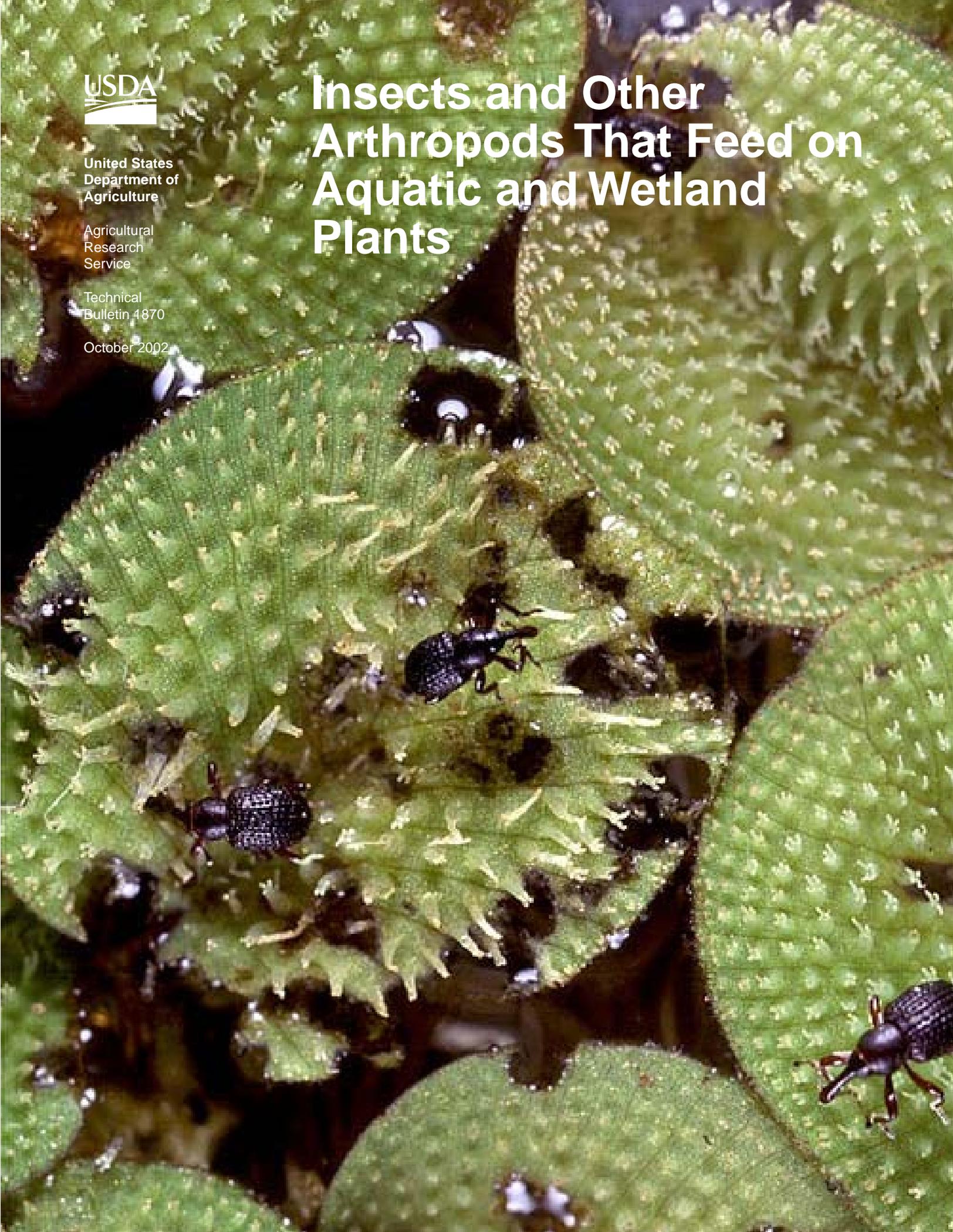
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Insects and Other Arthropods That Feed on Aquatic and Wetland Plants



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Figure 1. Alligatorweed flea beetle

A, Alligatorweed heavily damaged by *Agasicles hygrophila* intermixed with water pennywort

B, Cluster of hatched alligatorweed flea beetle eggs with two first-instar larvae

C, Adult alligatorweed flea beetle

D, Late instar *Agasicles hygrophila* larva on an alligatorweed leaf that shows damage caused by larval feeding

E, Adult *Agasicles hygrophila* on an alligatorweed stem that shows epidermal damage caused by the adult beetles

F, Alligatorweed flea beetle emerging from its pupal chamber in an alligatorweed stem

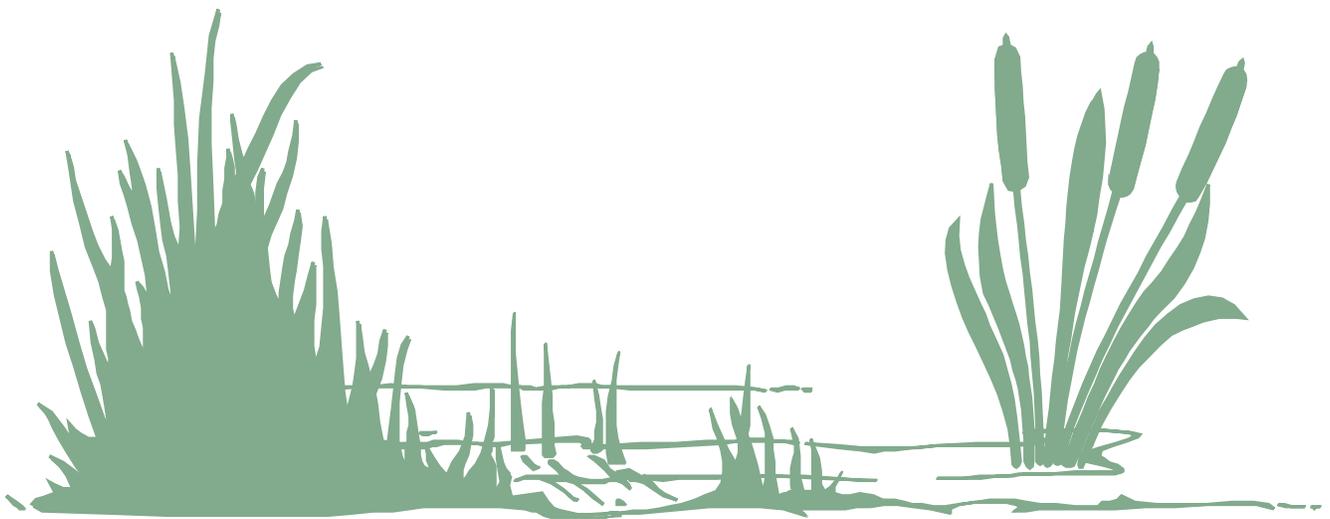




Figure 10. Frog's bit weevil

A, Larval galleries (light streaks) of *Bagous lunatoides* on frog's bit leaves. The holes in the leaves were caused by moth larvae.

B, *B. lunatoides* adult

C, Adult frog's bit weevils and feeding scars

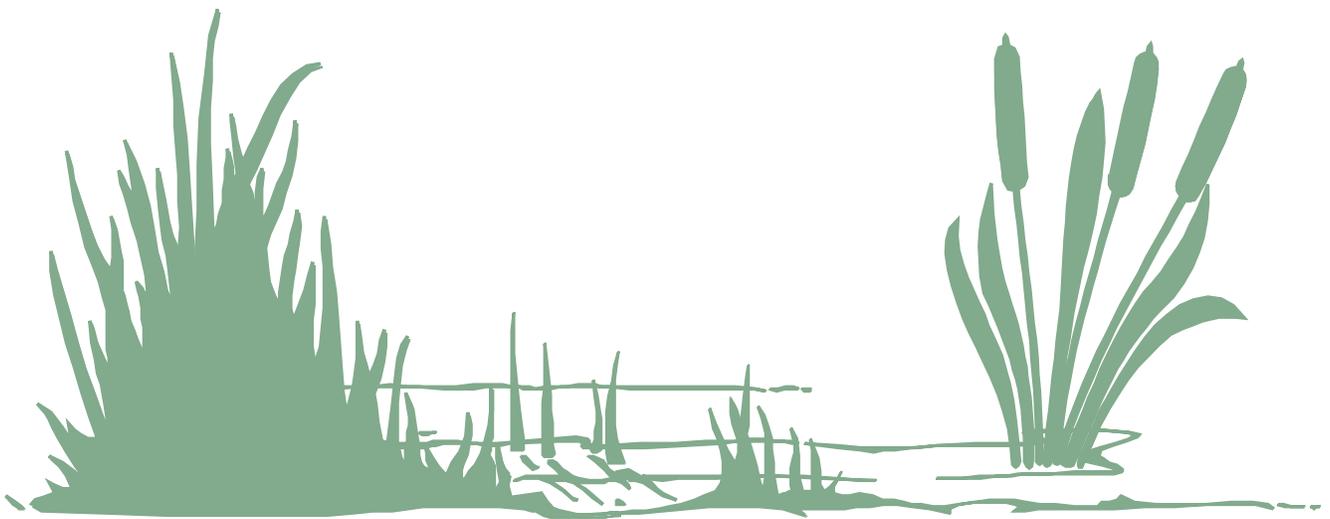




Figure 14. Hydrilla stem weevil

A, Adult hydrilla stem weevil and feeding damage on a hydrilla sprig

B, Egg of the hydrilla stem weevil in a leaf node

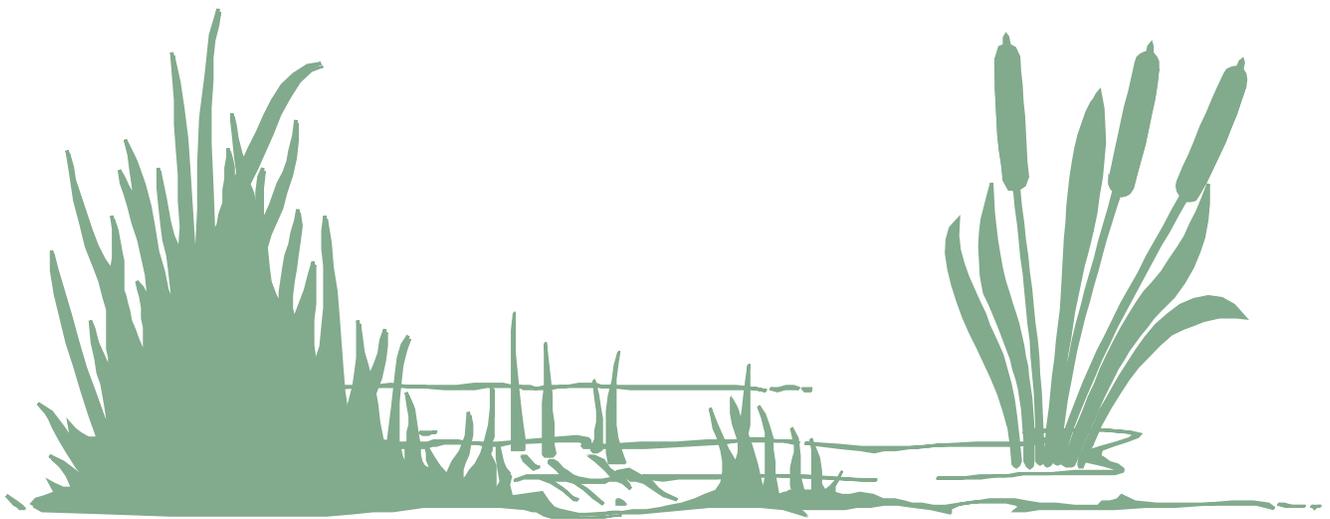
C, Fully grown hydrilla stem weevil larva

D, Hydrilla fragment harboring a fully grown hydrilla stem weevil larva

E, Stem fragment dissected to show the enclosed larva

F, Hydrilla damaged by hydrilla stem weevil larvae and adults

G, *Bagous hydrillae* pupa



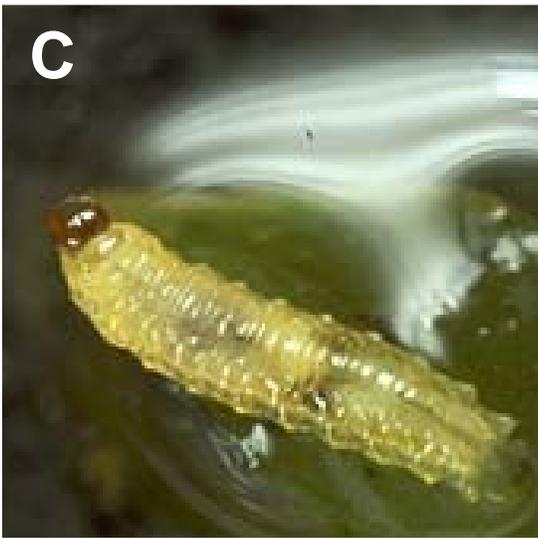


Figure 20. Pickerelweed borer

A, Bellura densa adult

B, Late-instar Bellura densa larva

C, Bellura densa egg mass

D, Waterhyacinth plant showing the typical crown damage caused by feeding of a *Bellura densa* larva

E, Bellura densa pupa within a waterhyacinth leaf petiole

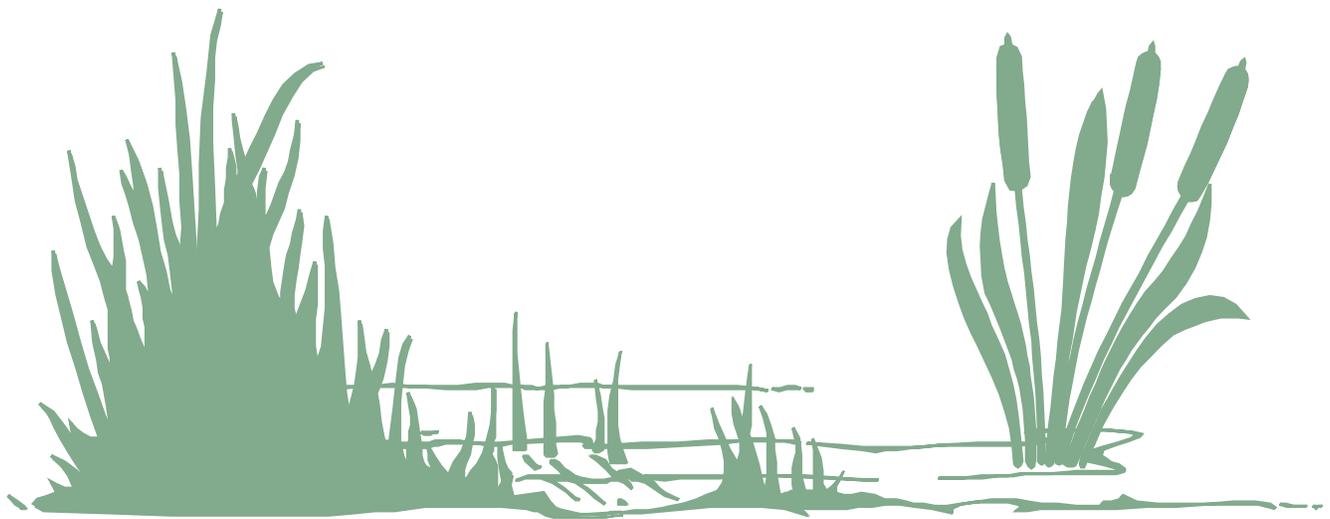




Figure 21. Pickerelweed weevil

A, Typical leaf scarring caused by the feeding of adult pickerelweed weevils

B, Adult pickerelweed weevil on a *Pontederia cordata* leaf

C, Adult pickerelweed weevil on a waterhyacinth leaf

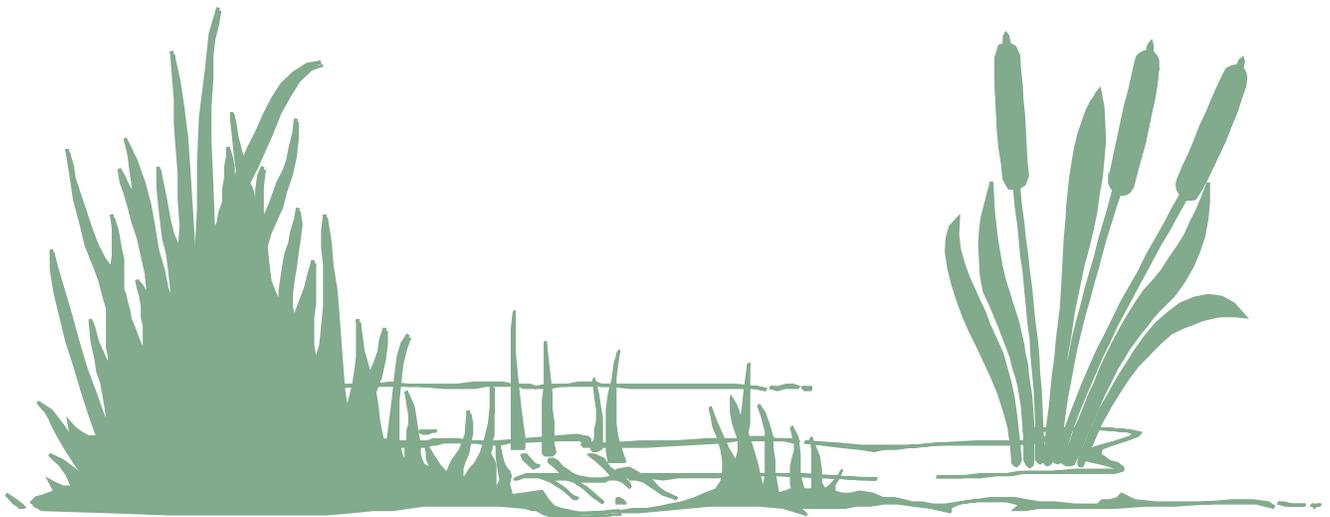




Figure 29. Waterhyacinth moth

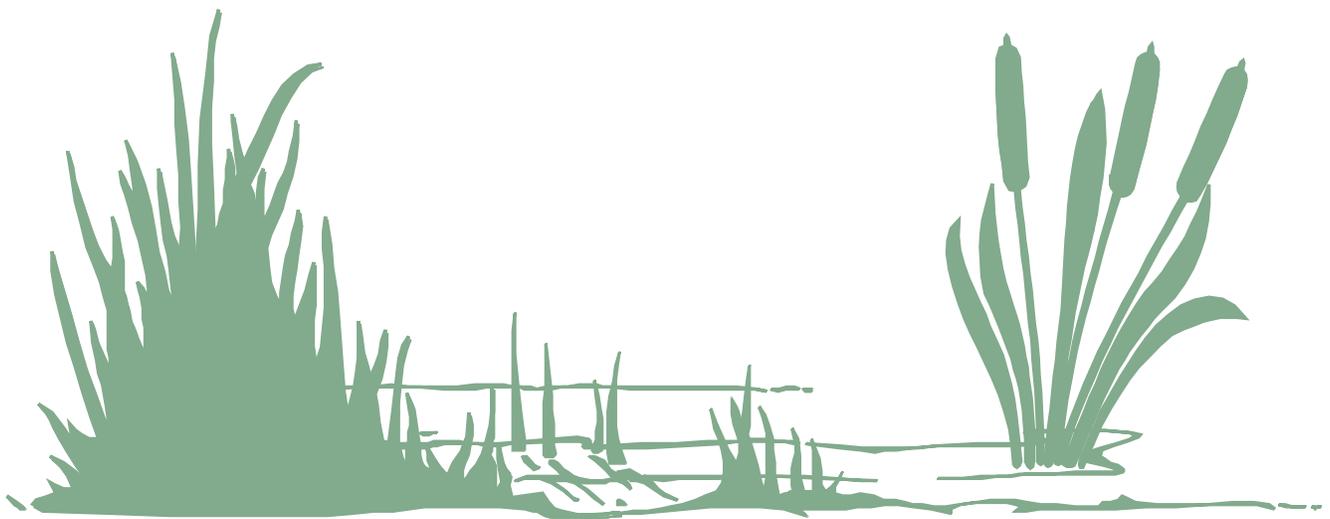
A, Waterhyacinth plant showing crown damage and the wilted central leaf caused by *Niphograptus albiguttalis* larval feeding

B, Adult male waterhyacinth moth

C, Adult female waterhyacinth moth

D, Late-instar *Niphograptus albiguttalis* feeding on the apical bud of a waterhyacinth rosette

E, Typical damage done to a waterhyacinth leaf petiole by early-instar *Niphograptus albiguttalis* larvae



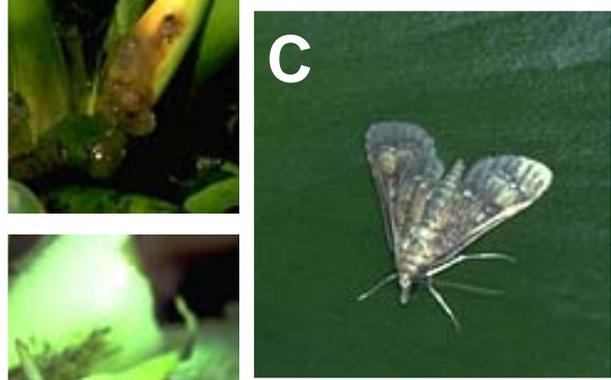


Figure 30. Waterhyacinth weevils

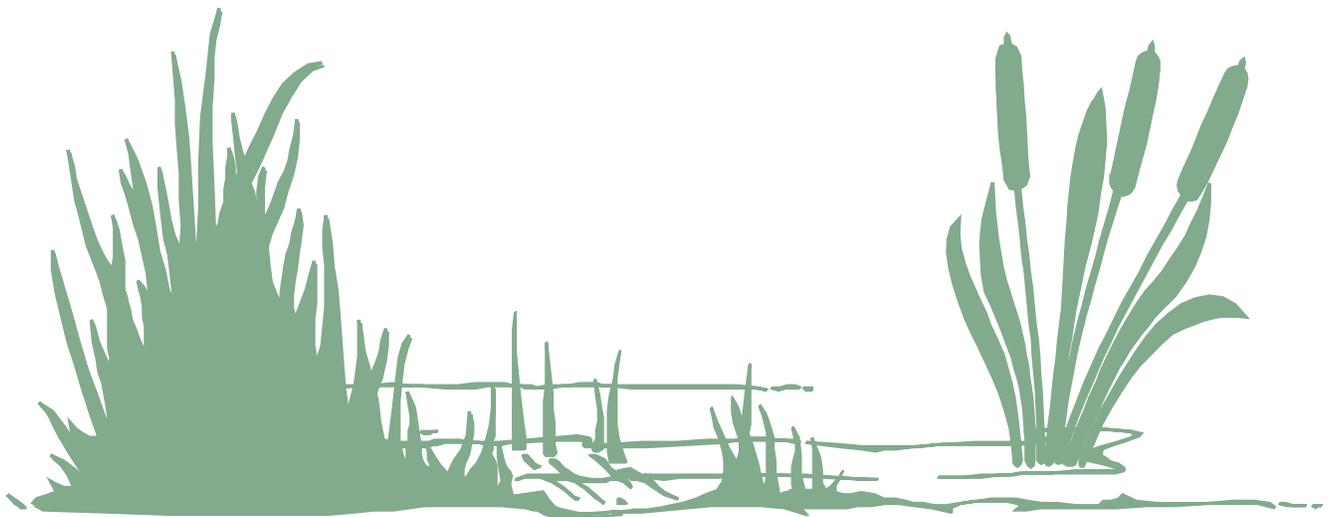
A, Adult *Neochetina eichhorniae* (left) and *N. bruchi* (right)

B, *Neochetina* larva feeding on the base of an axillary bud

C, *Neochetina* adult and the typical adult feeding "pits" on a waterhyacinth leaf

D, *Neochetina* cocoon on a waterhyacinth root

E, Waterhyacinth plants severely stressed by weevil attack



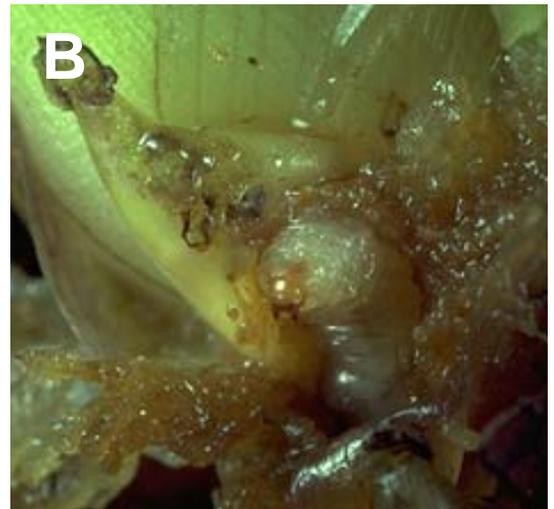


Figure 33. Waterlettuce weevil

A, Reddish-brown form of the waterlettuce weevil

B, Bluish-gray form of the waterlettuce weevil

C, Egg of *Neohydronomus affinis*

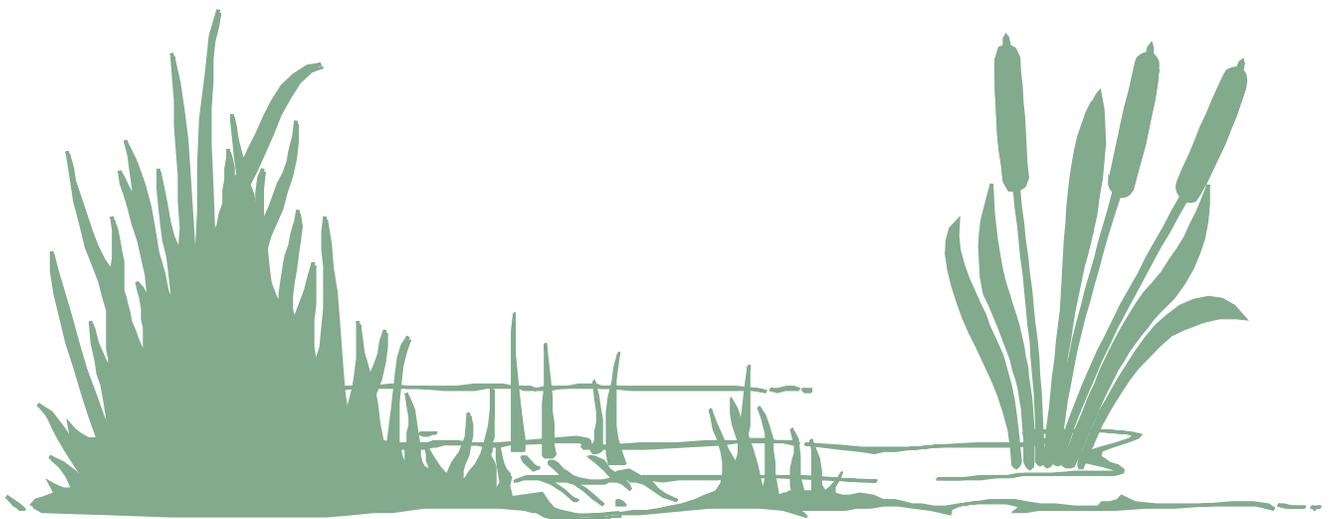
D, Larva of *Neohydronomus affinis*

E, Pupa of *Neohydronomus affinis*

F, Waterlettuce plant showing extensive leaf and crown damage caused by feeding of *Neohydronomus affinis*

G, Leaf punctures typical of feeding by adult *Neohydronomus affinis*

H, Typical *Neohydronomus affinis* larval galleries



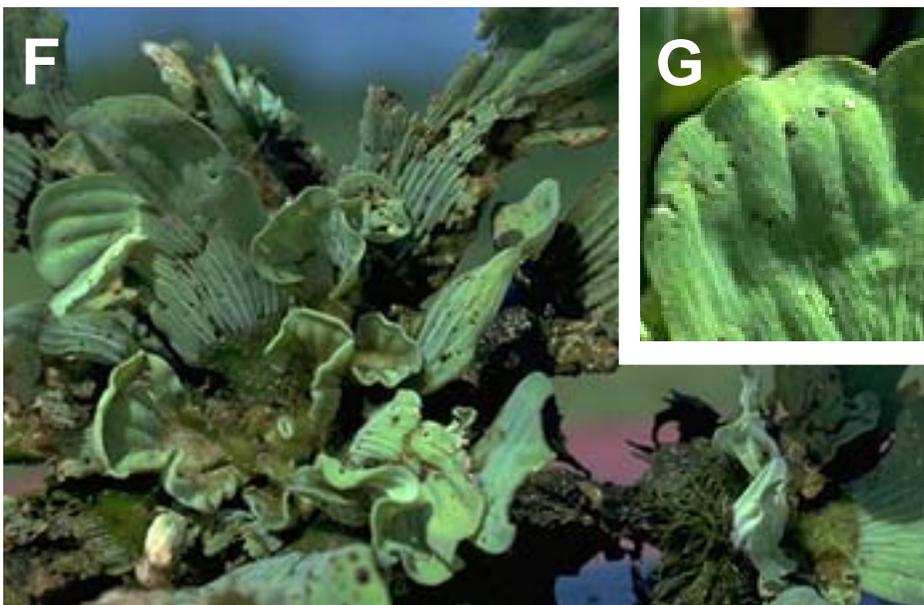


Figure 35. Water-primrose flea beetle

A, Adult *Altica litigata* with a cluster of eggs on a *Ludwigia octovalvis* leaf

B, Fully grown larva of the water-primrose flea beetle

C, Pupa of *Altica litigata*

