GRASSHOPPERS, CRICKETS, AND COCKROACHES (Orthoptera)

Usually large insects; hind legs often (grasshoppers and crickets) enlarged; FW narrow, HW broad and at rest folded fanwise.

LONG-HORNED GRASSHOPPERS, Family Tettigoniidae Antennae long and hairlike; tarsi 4-segmented; ovipositor sword-

BUSH KATYDIDS, Subfamily Phaneropterinae p. 80
Usually green and over 1 in.; FW flat, shorter than HW;

prosternal spines absent; vertex rounded.

Scudderia curvicauda (De Geer), &; e. N. America. MEADOW GRASSHOPPERS, Subfamily Conocephalinae p. 82 Slender, greenish, seldom over 1 in.; prosternum usually with a pair of small spines; vertex short.

Conocephalus brevipennis (Scudder), &; e. N. America.

SHORT-HORNED GRASSHOPPERS, Family Acrididae Antennae relatively short; tarsi 3-segmented; pronotum not prop. 78 longed backward over abdomen; wings usually well developed. SPUR-THROATED GRASSHOPPERS, Subfamily Cyrtacanthacridinae A spine or tubercle on prosternum.

Schistocerca americana (Drury); e. N. America.

BAND-WINGED GRASSHOPPERS,

p. 78 Subfamily Oedipodinae HW usually brightly colored; a median longitudinal keel on pronotum; hind margin of pronotum triangularly extended backward; face vertical or nearly so.

Dissosteira pictipennis Brunner; Calif. to s. Oregon.

CRICKETS, Family Gryllidae Body somewhat flattened; antennae long and hairlike; tarsi 3-segmented; ovipositor usually long and cylindrical. BUSH CRICKETS, Subfamily Trigonidiinae 2nd tarsal segment heart-shaped and flattened dorsoventrally; no teeth between tibial spines; ovipositor sword-shaped.

Phyllopalpus pulchellus (Uhler); N.Y. to Illinois and Florida.

OCKROACHES, Family Blattidae Body flattened and oval, head concealed from above by pronotum;

antennae long, hairlike; tarsi 5-segmented.
ORIENTAL COCKROACH, Blatta orientalis Linn.; N. America (introduced).

BUSH KATYDID LONG-HORNED **GRASSHOPPERS** MEADOW SPUR-THROATED GRASSHOPPER SHORT-HORNED GRASSHOPPERS BAND-WINGED GRASSHOPPER ORIENTAL COCKROACH **BUSH** CRICKET