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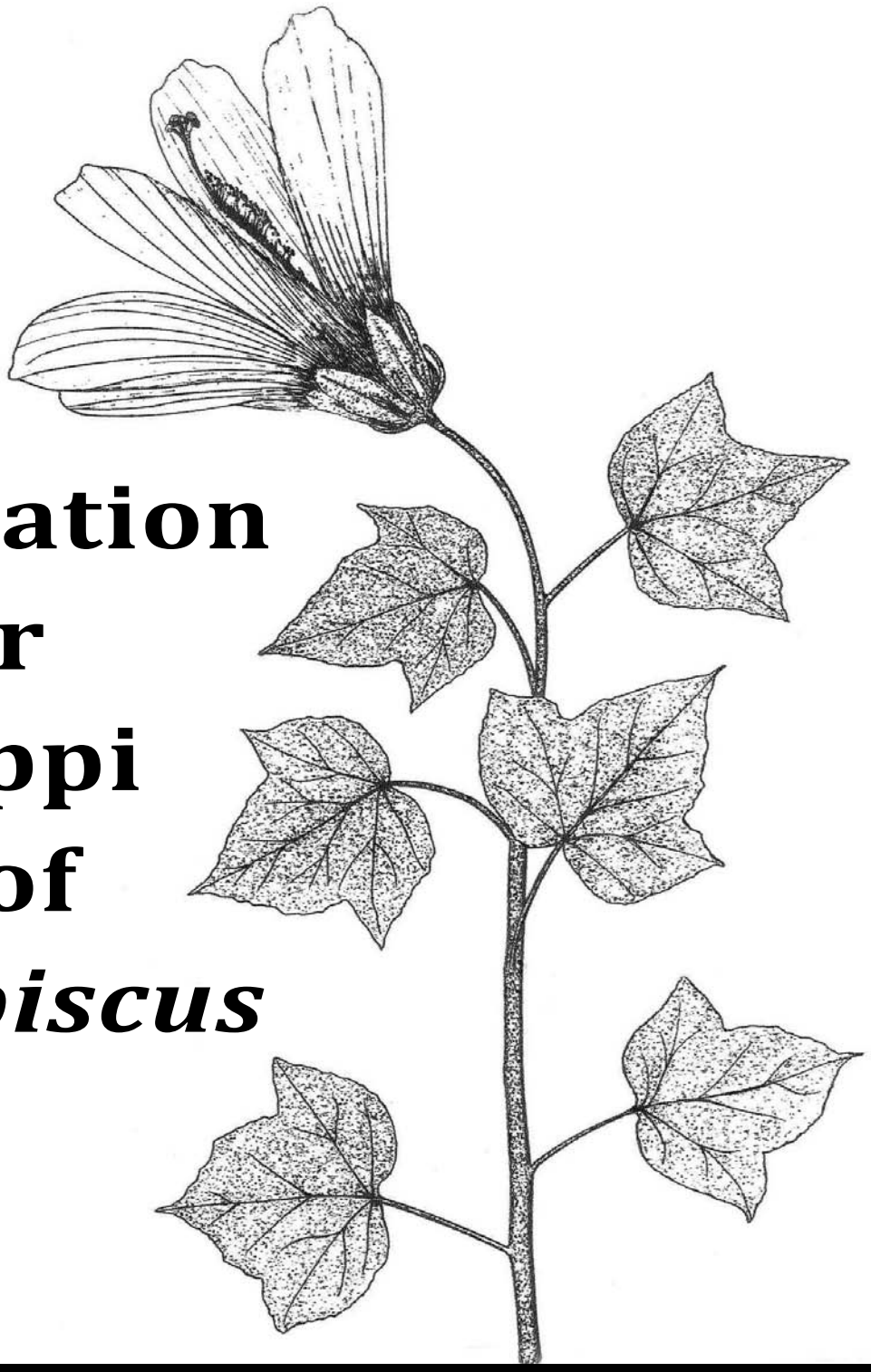

Identification Guide for Mississippi Species of Wild *Hibiscus*

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Identification Guide for Mississippi Species of Wild *Hibiscus*

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PREFACE

This publication is intended as an illustrative guide and key for identifying those species of *Hibiscus* that specifically occur in the wild as escapes or naturally in Mississippi. All descriptions and keys are from original notes reviewed by the author or from specimens collected at research sites. Those fascinated by the beauty and uses of *Hibiscus* will find this guide to be useful.

Acknowledgements — Barry Snow, a former student at Mississippi State University, illustrated all plant specimens. The author provided actual plant specimens for Snow to illustrate. The keys to the different species were developed from measurements and observations of actual field specimens collected by the author or from specimens observed by the author from herbaria at Mississippi State University, Institute for Botanical Exploration (IBE), Florida State University (FSU), University of North Carolina (NCU), University of Georgia (GA), and Texas A&M University (TAES). Also, a clear credit and thank you is due to Leslie Sullivan, who was instrumental in typing and preparing this manuscript.

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Introduction

The genus *Hibiscus*, L., is the largest in the family Malvaceae containing more than 250 species worldwide. This family also contains cotton (*Gossypium*, L.), jute (*Abutilon avicennae*), and many ornamentals such as hollyhock (*Althaea rosea*). There are about 16 species of *Hibiscus* found in the Southeast, not including the many cultivated varieties found in yards and gardens. This guide presents an overview of the eight species most commonly found in the wild or as escapes in Mississippi.

Procedure

All data for illustrations and identifications were obtained from field collections in Mississippi or herbaria material from Mississippi State University (MSU), Institute for Botanical Exploration (IBE), Florida State University (FSU), University of North Carolina (NCU), University of Georgia (GA), and Texas A&M University (TAES). Based on these collections and observations, the most abundant and widely distributed wild species in Mississippi are *H. laevis* ALL. (= *H. militaris* Cav.) and *H. moscheutos* L. The ubiquitous *H. rosa-sinensis* (Chinese-Rose) and *H. syriacus* L. (Rose-of-Sharon) are the most often seen cultivated species in the state, as well as the common okra, *H. esculentus* L. [=*Abelmoschus esculentus* (L.) Moench.].

Edibility and Medicinal Uses of *Hibiscus*

There are many species of *Hibiscus* that are good table fare. The common okra plant is grown widely in Mississippi and throughout the Southeast as a vegetable and as a condiment of great renown in "Cajun" cuisine. The calyces of *Hibiscus sabdariffa*, commonly known as Roselle or red sorrel, are used widely for food. Roselle is listed in many herbal-use manuals as a mild laxative and diuretic. It contains citric and glycolic acids. According to some authors, a type of lotion can be made that is said to have healing effects on skin irritations and shallow cuts or wounds. Another edible plant in this genus is the Abika plant (*H. manihot* L. or *Abelmoschus manihot* L.), which is native to the tropics. The flower buds and leaves are eaten raw and have a sweet, muscilaginous flavor.

A plant that has been studied for many years as an alternative crop for farmers in the South is Kenaf, *H. cannabinus* L. It is a native of Africa and is grown as a crop on some 12,000 acres in the South. Its seeds are reported to be roasted to make a coffee substitute or to be ground into flour, baked into cakes, and consumed.

SYNONYMY AND NOMENCLATURE OF CERTAIN *HIBISCUS*

Many of the plants presently classified in the genus *Hibiscus* will hybridize readily. This fact and our current knowledge of the makeup of this genus can cause duplication and some confusion of names applied to it. Plants from various geographic regions growing under different weather and soil conditions present many different physical characteristics taxonomists must deal with in identifying them. No attempt is made here to address the multitude of problems in synonymy or give all possible solutions to the various taxonomic difficulties within this genus. However, I have made a preliminary excursion into the literature and have made a brief list of some of the most common synonyms and identification problems the reader may encounter in studying the wild species of *Hibiscus* of Mississippi.

Currently accepted sections and taxons for *Hibiscus* spp. occurring in Mississippi are listed in the box at the top if the righthand column. There are 10 sections that most taxonomists agree have a similar phylogeny and similar characteristics for identification purposes of all species.

Because species of *Hibiscus* can hybridize readily and they occur over a wide range, the names attached to specific plants will be debated by different taxonomists. For example, the common okra has two accepted scientific names, *Abelmoschus* (L.) Moench. and *Hibiscus esculentus* L. depending upon the scientist or the publication. Another species commonly associated with several names is *H. moscheutos* L. Several taxa within this species are treated as subspecies, varieties, or distinct species depending upon the author. Blanchard (1976) reported two subspecies should be recognized under the species *H. moscheutos* L., particularly *H. moscheutos* subsp. *lasiocarpos* (Cav.) O.J. Blanchard and *H. moscheutos* subsp. *moscheutos*. In many references before 1970, the name *H. palustris* L. is given distinct species note. However, several authors have suggested it be given subspecies recognition or be labeled a geographical variant of *H. moscheutos* L. Almost all the other plants noted here may have some nomenclatural or other taxonomic discrepancies. However, the names presented for them more commonly are accepted than those noted in the list of synonyms.

As long as there are taxonomists, there will be different views as to what names should be associated with a distinct group of plants that have similar characteristics either chemically, physiological or otherwise. The purpose of this publication is not to provide an in-depth taxonomic review of *Hibiscus* species but instead present a useable key for the amateur plant enthusiast to easily identify different species of wild *Hibiscus*.

Hibiscus Sections:

Bombicella	Lilibiscus
Calyphylli	Muenchhusia
Furcaria	Spatula
Hibiscus	Trionum
Ketmia	Venusti

Accepted Scientific Name	Listed Synonym(s)
H. aculeatus Walt.	*H. saber* Michx.
H. coccineus (Medic.) Walt.	*H. semilobatus* Chapman,
H. laevis All.	*H. militaris* Cav.
H. moscheutos L.	*H. palustris* L., *H. leucophyllus* Shiller, *H. oculiroseus* Britt, *H. lasiocarpos* Cav., *H. incanus* Wendl. *H. roseus* Thore
H. syriacus L.	*H. rhombifolius* Cav., *Ketmia arborea* Moench. *H. floridus* Salisb.
H. rosa-sinensis	*H. javanicus* Miq., *H. rosa-sinensis* v. *rubroplenus* Sweet
H. grandiflorus	
H. esculentus	*Abelmoschus esculentus*

Distribution and Common Names of *Hibiscus* in Mississippi

Most plants in the genus that occur in Mississippi are ornamentals and escapes. One author listed 244 accepted scientific names comprising the genus with many synonyms (Hinsley 2004). Of these 244 species, only about eight occur here as wild, native, introduced, or escaped and ornamentals. Listed below are the most common species found in Mississippi along with some notes on common names and locations where they can be found.

Scientific Name	Common Name	Mississippi Distribution
H. aculeatus	Confederate rose	Southern counties, field borders, ditches, pinelands
H. coccineus	Scarlet-rose-mallow Texas star	Coastal swamps
H. laevis	Sweating weed Halberd-leaved-rose Soldier mallow	Native statewide, ditches, streams
H. moscheutos	Marsh mallow Sea hollyhock Swamp-rose-mallow	Statewide, brackish and fresh marshes
H. rosa-sinensis	Chinese rose	Escaped and cultivated statewide
H. syriacus	Rose-of-Sharon	Escaped and cultivated statewide
H. grandiflorus		Coastal marshes
H. esculentus	Okra, Gumbo	Escaped and cultivated statewide

Glossary of Scientific Terms

Adnate — Grown together, organically united with another part; as stamens with the corolla tube or an anther in its whole length with the filament.

Bract — A much-reduced leaf, particularly the small or scale-like leaves in a flower cluster or associated with the flowers.

Canescent — Gray-pubescent and hoary, or becoming so.

Ciliate — Fringed with hairs; bearing hairs on the margin.

Denate — With sharp, spreading, rather coarse indentations or teeth that are perpendicular to the margin.

Elliptic — A flat part or body that is oval and narrowed to rounded ends and widest at or above the middle.

Glabrous — Not hairy; often incorrectly used in the sense of smooth.

Hastate — Of the shape of an arrowhead but the basal lobes pointed or narrow and standing nearly or quite at right angles; halberd-shaped.

Hirsute — With rather rough or coarse hairs.

Hispid — Provided with stiff or bristly hairs.

Lanceolate — Lance-shaped; much longer than broad; widening above the base and tapering to the apex.

Obovate — Inverted ovate.

Ovate — With an outline like that of a hen's egg cut in two lengthwise, the broader end below the middle.

Pubescent — Covered with short soft hairs; downy.

Scabrous — Rough; feeling roughish or gritty to the touch.

Serrate — Saw-toothed margin with the teeth pointing forward.

Tomentose — With tomentum; densely wooly or pubescent; with matted soft wool-like hairiness.

Definitions of terms are from a combination of all the listed references and personal notes.

KEY TO *HIBISCUS* SPECIES

General Characteristics of *Hibiscus*:

Annual or perennial herbs and shrubs. Leaves alternate, simple to lobed or dissected. Flowers actinomorphic, axillary, and paniculate, primarily occurring in upper one-third of plant. Petals 5, white, pink, reddish, or yellow; stamens numerous, united in a column; styles united; stigmas 5 capitate. Fruit a capsule with 5 locules.

1. Shrubs or small trees; primarily cultivated as ornamentals. . . . . Key 1

1. Annual or perennial herbs . . . . . Key 2

Key 1

1. Leaves triangular ovate, 4–15 cm long, serrate-dentate; flowers white, purple, or red.

    1. Capsules ovoid, glabrous; staminal column 5–10 cm long extending beyond corolla . . . . . 1. *H. rosa-sinensis*

    1. Capsule elliptic, densely pubescent; stamens included in corolla . . . . . 2. *H. syriacus*

Key 2

1. Leaves 3–7, lobed, glabrous, or pubescent.

    2. Leaves densely pubescent on upper, lower, or both surfaces; capsules pubescent or glabrous.

        3. Capsules hirsute; leaves 3-lobed, or cleft; surfaces scabrous or tomentose.

            4. Leaves palmately 3–5 cleft, scabrous; petals cream; capsules with short bristly trichomes . . . . . 1. *H. aculeatus*

            4. Leaves 3–5 lobed; tomentose, petals white to pink; capsules hirsute . . . . 2. *H. grandiflorus*

1. Leaves glabrous on both surfaces; capsules glabrous

    5. Leaves 3–7 parted; flowers red, 12–15 cm across, petals narrowed at base . . . . . 3. *H. coccineus*

    5. Leaves hastate; flowers white to pink, 7–12 cm across, petals not narrowed at base . . . . . 4. *H. laevis*

1. Leaves, unlobed, ovate to elliptic-lanceolate, pubescent.

    6. Calyx 18–40 mm long, glabrous to canescent; peduncles fused to petioles.

        7. Leaves ovate to triangular-ovate, densely pubescent; bracts linear, often ciliate; capsule densely pubescent. **Note comments below. . . . . 5. *H. lasiocarpus*

        7. Leaves elliptic-lanceolate, glabrous or pubescent; bracts not ciliate; capsules glabrous . . . . . 6. *H. moscheutos*

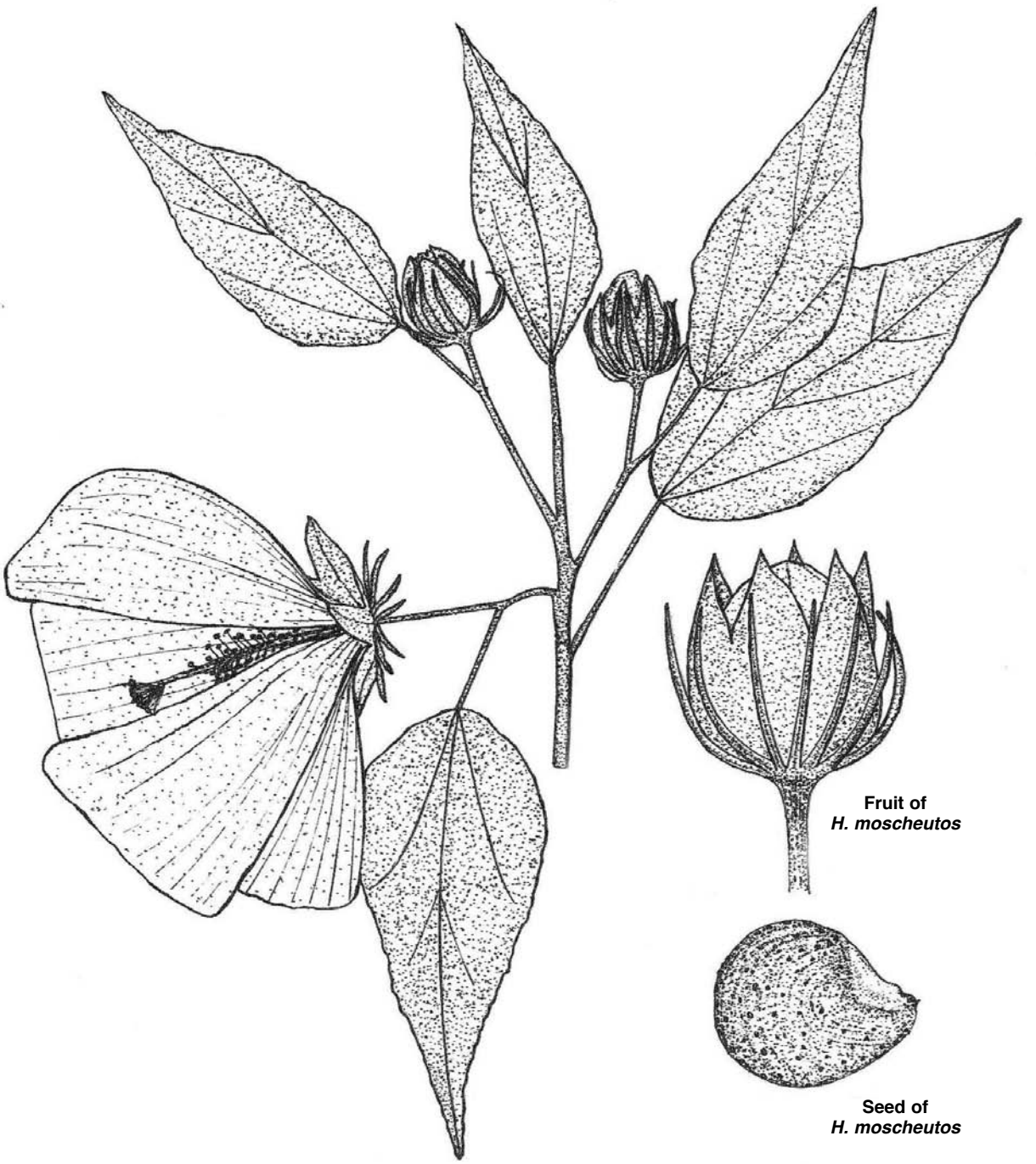
** *The species listed here has been variously interpreted as a distinct species and as a subspecies. Blanchard (1976) views this as a subspecies within* H. moscheutos *L.*

Fruit of *H. aculeatus*

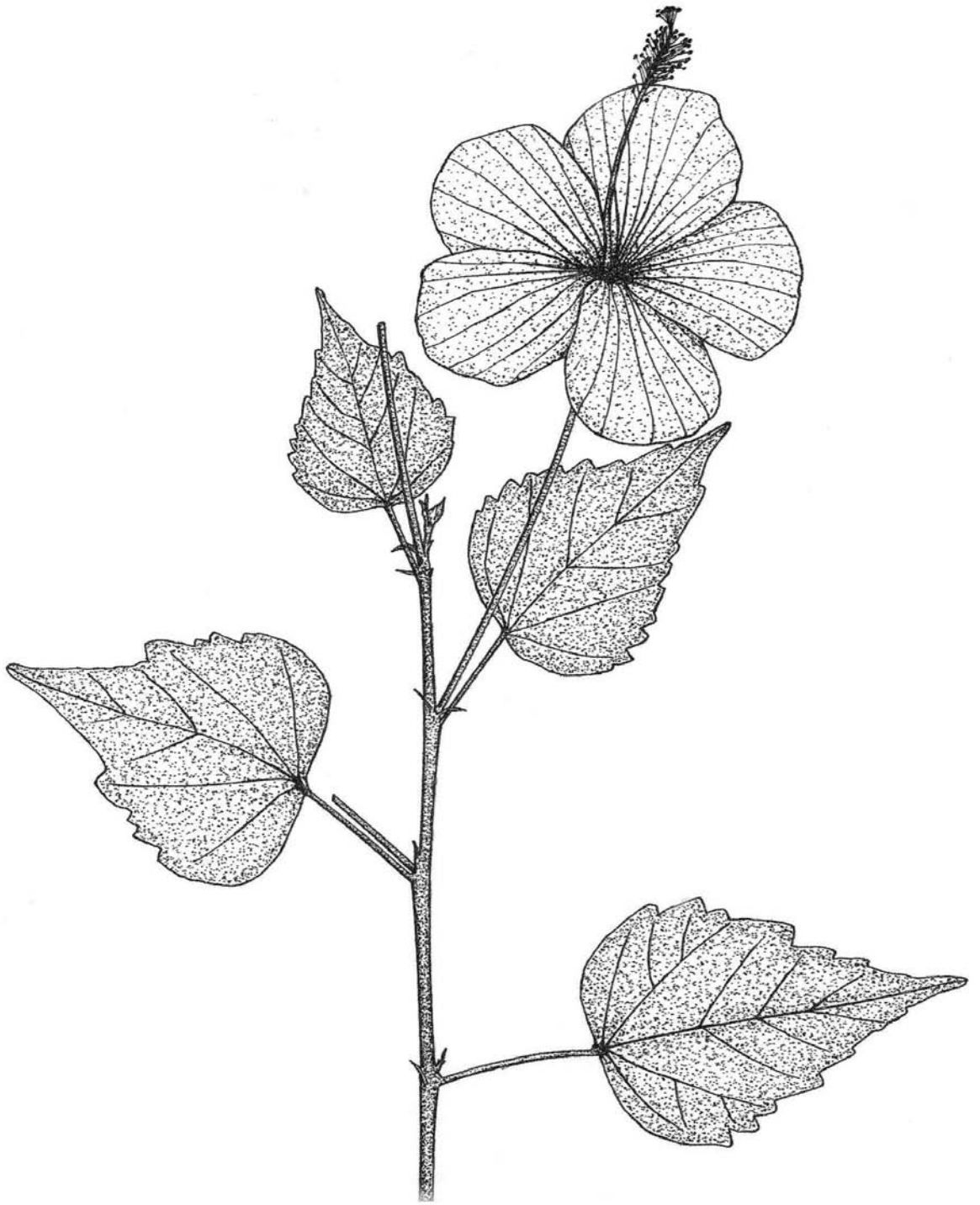
H. aculeatus Walt. Hirsute perennial, 1–2 m tall. Leaves palmately 3–5 cleft, scabrous, coarsely denate. Calyx loves lanceolate, with stiff bristles. Petals yellowish-cream with red basal spot. Capsules conical, 1.5 cm long, hispid. Roadsides, old fields, pine flatwoods of North Carolina, South Carolina, Georgia, Alabama, Mississippi, and Louisiana. (Original drawing by Barry Snow.)

H. coccineus (Medic.) Walt. Glabrous perennial, 1–2.5 m tall. Leaves 3–7 parted, slightly denate. Flowers axillary, solitary, 10–20 cm across. Petals dark red, obovate; staminal column exerted. Capsule globose, glabrous. Swamps and coastal marshes of North Carolina (new record), Georgia, Florida, Alabama, and Mississippi. (Original drawing by Barry Snow.)

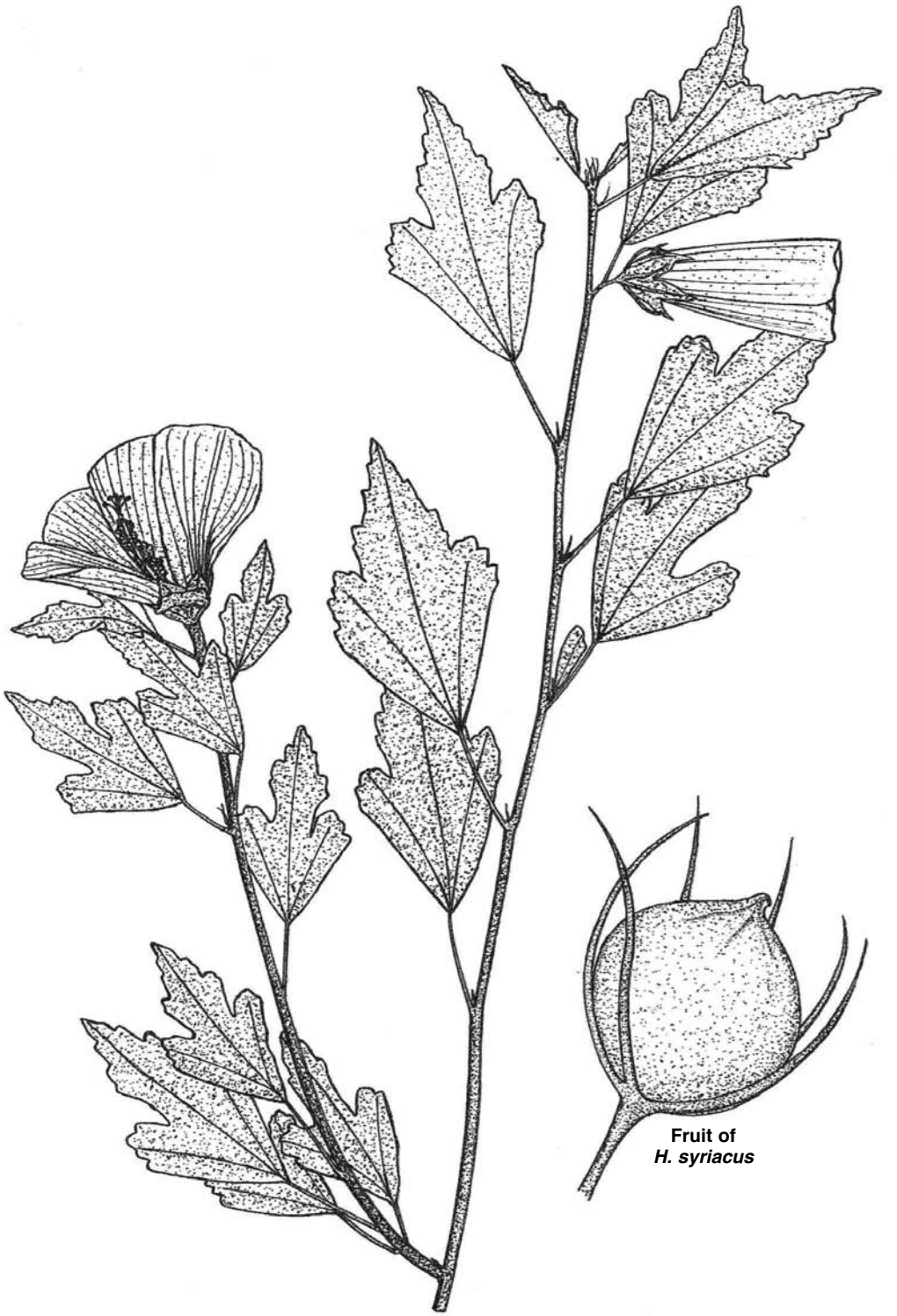
H. laevis All. Halberd-Leaved-Rose. Glabrous perennial, 1–2 m tall. Leaves 3–lobed, many hastately lobed. Flowers axillary, solitary. Calyx enclosing the capsule. Petals cream-pink, 6–8 cm long, with red basal spot. Capsule ovoid, 1–2 cm long, glabrous. Seeds pubescent. Swamps, ditches, streams of the Southeast. *H. militaris* Cav.—S. (Original drawing by Barry Snow.)



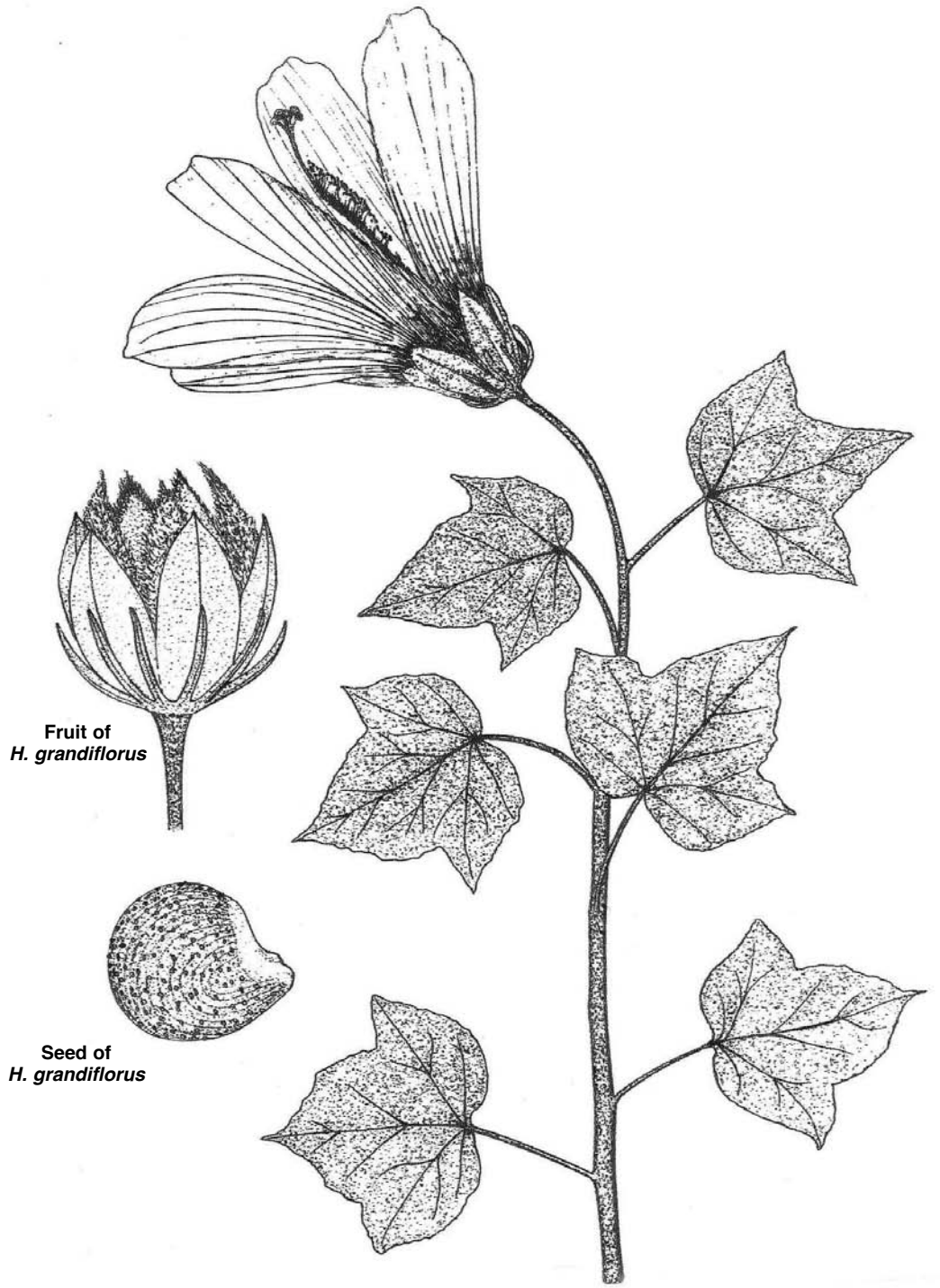
H. moscheutos L. Swamp-Rose-Mallow. Pubescent perennial, 1–2.5 cm tall. Leaves elliptic-lanceolate, 10–20 cm long, glabrous above, pubescent below, serrate. Flowers axillary, with peduncles adnate to subtending petiole. Involucral bracts 15–25 mm long, linear. Petals usually white with red basal spot; staminal column 2 cm thick; style 5–6 cm long, style branches glabrous. Capsule ovoid, glabrous. Seed glabrous. Marshes, ditches, and roadsides of the Southeast. *H. oculiroseus* Brit.—S. (Original drawing by Barry Snow.)



H. rosa-sinensis L. Chinese-Rose. Shrub or tree, 5–10 m tall. Leaves alternate, ovate-lanceolate, variously denate, 4–15 cm long. Calyx lobes lanceolate, pubescent. Corolla 8–15 cm across; petals rose-red to many shades depending on variety; staminal column exerted. Capsule ovoid, 2–3 cm long. Native of China. Cultivated Southeast. (Original drawing by Barry Snow.)



H. syriacus L. Rose-of-Sharon. Shrub, 3–8 m tall. Leaves alternate, 3-lobed, crenate, 4–10 cm long. Flowers axillary, often double. Petals white, blue, or purple; staminal column equaling or shorter than corolla. Capsule elliptic, brown, densely yellowish pubescent. Seed ciliate. Roadsides, waste areas; native of western Asia and cultivated Southeast. (Original drawing by Barry Snow.)



H. grandiflorus Michx. Tomentose perennial, 1–2.5 m tall. Leaves 3-lobed, dentate, and usually tomentose. Flowers axillary, solitary. Petals 12–15 cm long, pink, usually with red basal spot. Capsule ovoid, hirsute. Coastal marshes of Georgia, Florida, Alabama, and Mississippi. (Original drawing by Barry Snow.)

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