

**ARIZONA GAME AND FISH DEPARTMENT
HERITAGE DATA MANAGEMENT SYSTEM**

Plant Abstract

Element Code: PDSOL06012

Data Sensitivity: No

CLASSIFICATION, NOMENCLATURE, DESCRIPTION, RANGE



ME: *Capsicum annuum* var. *glabriusculum* (Dunal) Heiser & Pickersgill
COMMON NAME: Chiltepin, Cayenne, Chillipiquin, Chiltepe, Pequin, bird pepper, ají
SYNONYMS: *Capsicum hispidum* var. *glabriusculum* Dunal*, *C.a.* var. *aviculare* (Dierbach) D'Arcy & Eshbaugh, *C.a.* var. *minimum* (Miller) Heiser, *C.a.* var. *minus* (Fingerhuth) Shinnars, *C. baccatum* auct. non L., *C. frutescens* sensu Standl., non L.
FAMILY: Solanaceae

AUTHOR, PLACE OF PUBLICATION: *Capsicum annuum* var. *glabriusculum* (Dunal) C.B. Heiser & B. Pickersgill, *Baileya* 19(4): 156. 1975. *Capsicum hispidum* var. *glabriusculum* Dunal, *Prodromus Systematis Naturalis Regni Vegetabilis* 13(1): 420. 1852.

TYPE LOCALITY: *Capsicum hispidum* var. *glabriusculum*: Mexico.

TYPE SPECIMEN: *Capsicum hispidum* var. *glabriusculum* – ST: Berlandier 1863, Sep 1928, Mexico: circa Bejar (hb. Moric.; IST: F (photo, MO)). Also ST: Berlandier 95, Mexico: circa Tampico de Tamaulipas (hb. Moric).

TAXONOMIC UNIQUENESS: The variety *glabriusculum* is 1 of 2 in the species *C. annuum*, which is 1 of 4 species in the genus *Capsicum*. In addition, var. *glabriusculum* is a wild variety of *C. annuum*, which is a widely cultivated species with many forms.

DESCRIPTION: Plants more or less shrubby, but can range from 12.7-17.8 cm (5.0-7.0 in.) tall to 1.8 - 2.5 m (6.0-8.0 ft.) tall; stems widely branched. Leaves are tear-drop shaped, slender petiolate, entire, and arranged alternately on the stem. A white scar is left on stem when leaves fall off. Peduncles are long and slender, often in pairs, spreading or somewhat reflexed. The calyx is small, shallowly toothed or truncate. Corolla is rotate, deeply cleft, and whitish. The fruit of wild plants are small, short-ovoid or nearly globose (domesticated slightly elongated oval), persistent, green in color maturing to red with a very "hot" taste. They are thin-fleshed and easily dried.

AIDS TO IDENTIFICATION:

ILLUSTRATIONS: Illustration in *Flora of Baja California*. (Wiggins 1980).

Color photo (J.R. Manhart, *in*

<http://botany.cs.tamu.edu/FLORA/dcs420/mi12098.jpg>)

Color photo (Roger Hammer, *in* *Atlas of Florida Vascular Plants* at

<http://www.plantatlaqs.usf.edu/image.asp?imageID=6991>)

Color photos (Tom Newman September 4th and 9th 2001)

Color photos of plant and habitat (Tom Newman 10/30/2001).

TOTAL RANGE: Ranges from Connecticut through New York and Pennsylvania, south through Virginia, North and South Carolina, south to Florida, and west through Alabama, Louisiana, South Texas, and southern Arizona. Also occurs in Puerto Rico and possibly southern New Mexico. (USDA, NRCS 2002). The USDA, ARS (2003) cites the native range for Northern America as Mexico, and the United States, including Arizona, Florida and Texas. It reports the Southern America native range as the Bahamas, Columbia, Costa Rica, Guatemala, Nicaragua and Panama. Other locations are reported to be naturalized.

RANGE WITHIN ARIZONA: A few populations in Chiricahua, Tumacacori, Baboquivari, and Ajo Mountains.

SPECIES BIOLOGY AND POPULATION TRENDS

GROWTH FORM: Herbaceous to woody perennial or annual.

PHENOLOGY: September, with ripe fruit from August to December (depends on first frost).

BIOLOGY: Frost sensitive; plants die back after frost and regrow next growing period. They are usually found growing in the wild under a nursery tree. Humans, insects and birds disperse the fruits/seeds.

HABITAT: Canyons and slopes of desert riparian habitats in mesquite and oak woodlands.

ELEVATION: 3,600 - 4400 feet (1098-1342 m) in Arizona.

EXPOSURE: Various.

SUBSTRATE:

PLANT COMMUNITY: Mesquite and Oak Woodland. Associated plants include hopbush (*Dodonaea viscosa*), kidneywood (*Eysenhardtia polystachya*), wild cotton (*Gossypium thurberi*), desert hackberry (*Celtis pallida*), coralbean (*Erythrina*), knotweed (*Polygonum*), *Acacia*, reticulated hackberry (*Celtis reticulata*) and catclaw mimosa (*Mimosa biuncitera*).

POPULATION TRENDS: Chiltepin is declining in some areas of Sonora due to collecting. Don Norman is studying the Rock Corral Canyon population. Sixty plants were tagged there in 1986 by Gary Nabhan. He estimated age class distribution by using number of fruits produced per plant (assuming older plants produce more fruit). He believes the population is relatively stable.

SPECIES PROTECTION AND CONSERVATION

ENDANGERED SPECIES ACT STATUS: None
STATE STATUS: None
OTHER STATUS: Forest Service Sensitive (USDA, FS Region 3 1999)
[Forest Service Sensitive USDA, FS Region 3 1990]

MANAGEMENT FACTORS: Commercial collection for use as spice. Tohono O'odham Indians transplant wild plants into gardens for peppers. Regulation of collection is needed.

CONSERVATION MEASURES TAKEN:

SUGGESTED PROJECTS: Clarify taxonomy, monitor population stability, monitor commercial collecting impacts.

LAND MANAGEMENT/OWNERSHIP: BIA - Tohono O'odham Nation; USFS - Coronado National Forest.

SOURCES OF FURTHER INFORMATION**REFERENCES:**

- Heiser, C.B. Jr. 1964. *Ciencia y Naturaleza* 7:50-57
Heiser, C.B. Jr. and B. Pickersgill. 1969. *Taxon* 18:277-283.
Heiser, C.B. Jr. and B. Pickersgill. 1975. *Baileya* 19:151-156 (comp. nov.).
<http://www.ars-grin.gov/cgi-bin/npgs/html/taxon.pl?102342>.
http://www.geocities.com/dragon_loves_chilies/pequin.html.
<http://www.plantatlas.usf.edu/main.asp?plantID=2927>.
Integrated Taxonomic Information System (ITIS). Retrieved 9/9/2003 from ITIS, <http://www.itis.usda.gov>.
Jensen, R.J., M.J. McLeod and W.H. Eshbaugh. 1979. Numerical taxonomic analyses of allozymic variation in *Capsicum* (Solanaceae). *Taxon* 28:315-327.
Kearney, T.H., R.H. Peebles with collaborators. 1951. Arizona flora. Second edition with supplement by J.T. Howell, E. McClintock and collaborators. 1960. University of California Press. Berkeley. p.755 (*C. baccatum*).
McLeod, M.J., W.H. Eshbaugh, S.I. Guttman 1979. A preliminary biochemical systematic study of the genus *Capsicum-Solanaceae*. *The Biology and Taxonomy of the Solanaceae* pp. 701-714
Missouri Botanical Garden – TROPICOS, Nomenclatural Data Base. *Capsicum annuum* var. *glabriusculum* (Dunal) Heiser & Pickersgill. http://mobot.mobot.org/cgi-bin/search_vast. Accessed: 9 Sep 2003.

- Nabhan, G. 1978. Chiltepinos! Wild spice of the American Southwest. El Palacio 84:
Nabhan, G. 1979. Cultivation and culture. The Ecologist 9:259-263.
Nabhan, G.P. 1990. Conservationist and Forest Service Join Forces to Save Wild Chiles.
Diversity Magazine 6(3&4):47-48.
NatureServe. 2003. NatureServe Explorer: An online encyclopedia of life [web application].
Version 1.8. Arlington, Virginia. Available: <http://www.natureserve.org/explorer>.
(Accessed: August 20, 2003).
Shreve, F. and I. Wiggins. 1964. Vegetation and Flora of the Sonoran Desert. Stanford
University Press. Stanford. p. 1318.
The New York Botanical Garden. NYBG Specimens Detailed Results.
http://scisun.nybg.org:8890/searchdb/owa/wwwcatalog.detail_list. Accessed: 9/9/2003.
USDA, Forest Service Region 3. 1990. Regional Forester's Sensitive Species List.
USDA, Forest Service Region 3. 1999. Regional Forester's Sensitive Species List.
USDA, NRCS. 2002. The PLANTS Database, Version 3.5 (<http://plants.usda.gov>). National
Plant Data Center, Baton Rouge, LA 70874-4490 USA.
Wiggins, I.L. 1980. Flora of Baja California. Stanford University Press. Stanford.

MAJOR KNOWLEDGEABLE INDIVIDUALS:

- Richard Felger - Arizona-Sonora Desert Museum, Tucson Arizona.
Charles Heiser - Indiana University, Department of Botany, Bloomington.
Jack Kaiser - Retired (USDA), Nogales, Arizona.
Gary Nabhan - Native Seed Search, Tucson, Arizona.
Don Norman - Native Seed Search, Tucson, Arizona.
Paul Bosland - New Mexico State University, Horticulture Dept.
Steve Tansky - Cornell University, Ithaca, New York.

ADDITIONAL INFORMATION:

*Basionym.

Nabhan: Known in Arizona from Baboquivari, Tumacacori (Stone Corral Cabin), Chiricahua (Nat.Mon.), and Ajo mountains. Tohono O'odham have transplanted ones from Baboquivaris to 3-4 different villages (one is Little Tucson), at least 3 populations in Baboquivari Mountains. Bad freeze winter of 1978 killed some and hurt others. Plants become weedy 50 miles south of border in Sonora.

Kearney and Peebles: Very pungent berries, used as condiment and medicinally as a local stimulant.

Taxonomy is difficult because people move them around.

Chiltepin is used as a food additive for flavoring, and is related to chili pepper and bell pepper. Annual pilgrimages were made by the Indians of Arizona to harvest these tiny peppers that serve a variety of medicinal purposes, as well as in food.

Revised: 1991-04-13 (PLW)
1991-11-22 (SR)
2003-09-11 (SMS)

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Arizona Game and Fish Department. 20XX (= **year of last revision as indicated at end of abstract**). X...X (= **taxon of animal or plant**). Unpublished abstract compiled and edited by the Heritage Data Management System, Arizona Game and Fish Department, Phoenix, AZ. X pp.