### Artificial Key to the Orchids of New Mexico

**Thomas Todsen**

2000 Rose Lane, Las Cruces, NM 88005

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
<th>Answer</th>
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<tbody>
<tr>
<td>1.</td>
<td>Lip pouch- or slipper-like</td>
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<tr>
<td>2.</td>
<td>Lip pouch-like, yellow..... <em>Cypripedium parviflorum</em> Salib. var. <em>pubescens</em> (Willd.) Knight</td>
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<td>2.</td>
<td>Lip slipper-like, white to pink.... <em>Calypso bulbosa</em> (L.) Oakes var. <em>americana</em> (R. Brown) Luer</td>
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<tr>
<td>1.</td>
<td>Lip otherwise</td>
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<tr>
<td>3.</td>
<td>Plants leafless at flowering time</td>
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<tr>
<td>4.</td>
<td>Flowers white to pink</td>
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<td>5.</td>
<td>Flowers few, not in a dense twisted spike; lip with cinnabar blotch...............</td>
<td><em>Hexalectris revoluta</em> Correll</td>
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<td>5.</td>
<td>Flowers many, in a dense twisted spike; lip whitish, lacking a cinnabar blotch.......</td>
<td><em>Spiranthes magnicammarum</em> Sheviak</td>
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<td>4.</td>
<td>Flowers colored otherwise</td>
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<tr>
<td>6.</td>
<td>Flowers green......................... <em>Piperia unalascensis</em> (Spreng.) Rydb.</td>
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<td>6.</td>
<td>Flowers other than green</td>
<td></td>
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<td>7.</td>
<td>Lip with 3 or more fleshy calluses; pollinia 8</td>
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<td>8.</td>
<td>Lip deeply 3-lobed, the sinuses 3 mm or more long ..................</td>
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<tr>
<td>9.</td>
<td>Lip not deeply lobed, the sinuses 2 mm or less long</td>
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<td>9.</td>
<td>Lip less than 1 cm long.................. <em>Hexalectris nitida</em> L.O. Wms.</td>
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<td>9.</td>
<td>Lip more than 1.2 cm long</td>
<td></td>
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<tr>
<td>10.</td>
<td>Flowers open, out-crossing..............................................</td>
<td><em>Hexalectris spicata</em> (Walt.) Barnh. var. <em>spicata</em></td>
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<td>10.</td>
<td>Flowers closed, selfing.............................................</td>
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<tr>
<td>7.</td>
<td>Lip with 2 or fewer calluses; pollinia 4</td>
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<tr>
<td>11.</td>
<td>Lip 3-lobed or at least with small lobes or teeth</td>
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<tr>
<td>12.</td>
<td>Plant small, 10-15 cm tall; lip 3-5 mm long ..... <em>Corallhiza trifida</em> Chat.</td>
<td></td>
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<tr>
<td>12.</td>
<td>Plant taller, over 15 cm tall; lip 5-9 mm long</td>
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<td>13.</td>
<td>Lip little expanded; bracts less than 1 mm long................</td>
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<tr>
<td>13.</td>
<td>Lip distinctly expanded; bracts more than 1 mm long ................</td>
<td><em>Corallhiza maculata</em> Raf. var. <em>maculata</em></td>
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<tr>
<td>11.</td>
<td>Lip entire, without lateral lobes or teeth</td>
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<tr>
<td>14.</td>
<td>Lip with involute margin; tepals striped..........................</td>
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<tr>
<td>14.</td>
<td>Lip not involute; tepals not striped ........... <em>Corallhiza wisteriana</em> Conrad</td>
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<td>3.</td>
<td>Plants with leaves at flowering time</td>
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<tr>
<td>15.</td>
<td>Leaves basal only</td>
<td></td>
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<tr>
<td>16.</td>
<td>Leaves more than 20 cm tall ........................................</td>
<td><em>Goodyera oblongifolia</em> Raf.</td>
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<tr>
<td>16.</td>
<td>Plants less than 15 cm tall................................. <em>Goodyera repens</em> (L.) R. Brown</td>
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<tr>
<td>15.</td>
<td>Leaves cauline or appearing so</td>
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<td>17.</td>
<td>Leaves plicate, thin</td>
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<tr>
<td>18.</td>
<td>Lip 3-lobed......................................................... <em>Epipactis gigantea</em> Dougl.</td>
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(Continued on page 2, Orchids)

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**Botanice est Scientia Naturalis quae Vegetabilium cognitiorem tradit.**

— **Linnaeus**
18 Lip not 3-lobed ................................................................. Epipactis helleborine (L.) Crantz
17 Leaves not plicate, smooth
19 Leaf one, at mid-stem
20 Flowers red-purple.......................................................... Malaxis porphyreoides (Ridley) Kuntze
20 Flowers green
21 Flowers appressed to the rachis ........................................... Malaxis soulei L.O. Wms.
21 Flowers not appressed to the rachis ..................................... Malaxis tenuis (Wats.) Ames
19 Leaves more than one
22 Leaves 2 at mid-stem ......................................................... Listera cordata (L.) R. Brown var. nephrophylla (Ryd.) Hultén
22 Leaves more than 2, borne along the stem
23 Flowers white, arranged in a dense spike; lip lacking a spur .......... Spiranthus romanzzoffianus Cham.
23 Flowers mostly green, or white, then arranged in a loose spike with lax flowers; lip prolonged backward into an evident spur
24 Orifice of the spur minute; base of lip with accessory nectarines ......................................................... Coeloglossum viride (L.) Hartman var. virens (Muhl. ex Willd.) Luer
24 Orifice of the spur obvious; base of lip without accessory nectarines
25 Flowers white ......................................................................... Platanthera dilatata (Pursh) Lindl. ex Beck
25 Flowers green
26 Leaves short, almost bract-like ............................................... Platanthera brevifolia (Greene) Kranzlin
26 Leaves longer, not at all bract-like
27 Column comparatively large, ½ or more the length of the dorsal sepal ......................................................... Platanthera sparsiflora (Wats.) Schl.
27 Column comparatively small, less than ½ the length of the dorsal sepal
28 Lip with a small basal protuberance ........................................ Platanthera limosa Lindl.
28 Lip without a protuberance
29 Spike densely flowered ......................................................... Platanthera huronensis
29 Spike not densely flowered
30 Spur about equal to the lip ................................................... Platanthera hyperborea (L.) Lindl.
30 Spur about ½ or less the length of the lip ............................... Platanthera purpurascens

Citing Use of Herbaria

Jane Mygatt
Collection Manager, UNM Herbarium, University of New Mexico
Albuquerque, New Mexico 87131

Recently, there have been several articles in scientific journals, regional reports and newsletters written by New Mexico botanists who regularly use our local herbaria. Many authors are not citing use of herbaria in their acknowledgements. Walk-in visitors/botanists are expected to follow the same protocol and agreements as "off-site" researchers at institutions who formally borrow herbarium specimens.

In general, the agreement for using or borrowing herbarium specimens is: 1) the researcher will cite use of the collections (using the appropriate acronym) in any publication they author or presentation they give; 2) the researcher will provide the herbarium with a copy of any publication in which the specimens are mentioned.

Funding opportunities for herbaria are very competitive and smaller regional collections often are not viewed as a high priority. For the UNM Herbarium the budgetary allocations are, in part, apportioned by a show of how productive and well used the collections are. Part of this productivity is measured by documenting the research and publications of faculty, staff, research associates and the regional botanical community.

Botanists need to show support for our state-funded resources by citing use of the collections facilities or specimens in the acknowledgment section of any published article or presentation.

[Ed. Note: Thanks to Jane Mygatt for this very appropriate and timely reminder of our responsibilities as publishing authors.]

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Botany is the natural science that transmits the knowledge of plants.

— Linnaeus
Botanical Literature of Interest

TAXONOMY AND FLORISTICS:

MISCELLANEOUS:

RARE, THREATENED, AND ENDANGERED PLANTS: [There are numerous reports and discussions concerning rare New Mexico plants on the New Mexico Rare Plant Technical Council web site: http://biology.unm.edu/~chelo/nmrptcl.html]  

WEB SITES OF INTEREST:
Miscellaneous maps: www.lib.utexas.edu/Libs/PCL/Map_collection/ Topographic maps online: www.topozone.com  
Native Plant Society of New Mexico: http://npsnm.unm.edu/
New Plant Distribution Records

New records for New Mexico are documented by the county of occurrence and the disposition of a specimen (herbarium).

— Richard Spellenberg & Tom Wootten (see Botanical Literature of Interest: Spellenberg & Wootten 1999)


— Richard Worthington (P.O. Box 13331, El Paso, TX 79913)

Lechea tenuifolia Michx. (Cistaceae): Eddy Co. (NMC, UTEP).

— Kelly Allred (MSC Box 3-I, New Mexico State University, Las Cruces, NM 88003)

Carex planostachya Kuntze (Cyperaceae): Eddy Co. (MIC).

— Robert Sivinski (P.O. Box 1948, Santa Fe, NM 87504)


Physaria newberryi A. Gray var. yescola Sivinski (Brassicaceae): Valencia & Cibola

Cos. (NMC, UNM). [see also Botanical Literature of Interest, Sivinski 1999]

— Thomas Todsen (2000 Rose Lane, Las Cruces, NM 88005)

Hexalectris revoluta Correll (Orchidaceae): Eddy Co. (photo & map on file at Guadalupe Mt. National Park Headquarters and verified by T. Todsen).


— Patricia Barlow-Irick (see Botanical Literature of Interest: Barlow-Irick 1999)

Cirsium ochrocentrum subsp. martini P. Barlow (Asteraceae): Catron, Grant, & Hidalgo Cos. (NMC, UNM).

— Bill Hess (The Morton Arboretum, Lisle, IL 60532)

Forestiera shrevei Standl. (Oleaceae): Hidalgo Co. (NMC).

— S.L. O’Kane (see Botanical Literature of Interest: O’Kane 1999)

Lesquerella navajoensis O’Kane (Brassicaceae): McKinley Co. (NMC, UNM).