

a voice
for the natural
landscaping
movement



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Celebrating natives
plant and natural
landscapes
since 1979.

The Grapevine

By Maryann Whitman

Ecoregions and Robert Bailey of the U.S. Forest Service

Every now and then I leaf through past issues of the Wild Ones Journal (which you can do easily if you put all your past issues in 3-ring binders on publication hangers, available from Donna VanBeucken), and revisit an issue that impresses the socks off me. The May/June issue of 2002 is one such. In fact I would call it a milestone issue. On three pages a small cadre of members/volunteer writers restated the Wild Ones mission statement and brought us up to date on new ideas. They very succinctly introduced us to ideas of ecoregions and local ecotypes. Portia, Mariette, Pat, Lorraine and Christine, thanks again for a complicated task well done!

It is up to us, the readers, to educate ourselves more deeply, to take ownership of the ideas of ecoregions and ecotypes. I've been doing just that on the web. Following are some useful sites. (Some of these sites have addresses you may write to for free maps and information.)

Web Sites

- <http://wildones.org/land/ecotype.html>. "The Importance of Local Ecotype" is on this site at Wild Ones. Selecting "The Nature Conservancy" will take you to <http://gis.tnc.org/data/MapbookWeb>. The Nature Conservancy's Ecoregion map. It is based on Bailey's map of U.S. ecoregions (Bailey 1994).

Maps like this one, covering large areas like the continental U.S., are on a very gross scale. However, you can "zoom in" to more detailed scales. Each region of North America is broken down into six levels.

As an example, one Michigan map shows Michigan's two provinces subdivided into four sections:

200 HUMID TEMPERATE - DOMAIN
210 Warm Continental - Division
212 Laurentian Mixed Forest - Province
212H Northern Great Lakes - Section
212J Southern Superior Uplands - Section
220 Hot Continental - Division
222 Eastern Broadleaf Forest
(Continental) - Province
222I Erie and Ontario Lake Plain - Section
222J South Central Great Lakes - Section

- Descriptions of the terms used above can be found at: <http://www.fs.fed.us/land/pubs/ecoregions/>. Do read the useful introduction. Then explore. Information is available on any place from the Aleutian Islands, off the coast of Alaska, to the Everglades of Florida. Don't be put off by the terminology. Keep reading and you'll find friendly sentences, such as: "The Everglades is a shallow, broad (60 mi, 95 km) river with freshwater flowing southward from Lake Okeechobee to the Gulf of Mexico."

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- Another, even more refined, map based on Bailey's work, by Dennis Alberts, a Michigan ecologist, shows subsections and sub-subsections of ecoregions. It is at <http://www.npwrc.usgs.gov/resource/1998/rlandscp/rlandscp.htm>. Though this site covers only Michigan, Wisconsin and Minnesota, it gives you an idea of what you might find for your own area. A map for the country is available on CD from Jim Keys (jkeys01@fs.fed.us) at the Forest Service headquarters, Washington, D.C.

- Schematics of domains, divisions and provinces are drawn out at: http://www.fs.fed.us/land/ecosysmgmt/ecoreg1_home.html.

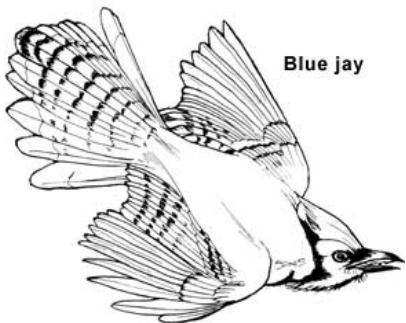
- Robert Bailey delineated ecoregions in the first place. You may order information and maps from him at http://www.fs.fed.us/institute/ecoregions/bob_pubs.html. Those without web access may write to:

Robert G. Bailey
USDA Forest Service
2150 Centre Ave. Suite 300
Ft. Collins, CO 80526
(970) 295-5727

The Oakland Wild Ones Chapter (maryannwhitman@comcast.net) has a small stock of one of Bailey's publications, *Ecoregions-Based Design for Sustainability* (mailed in the continental US and Canada for \$56 U.S., shipping included). The book is also available for \$50, plus shipping, at Amazon.com – but you won't be supporting a Wild Ones Chapter!

Bailey is currently working on a manuscript that summarizes and illustrates the rationale he used in identifying ecoregion boundaries. It's aimed at getting at the question that invariably arises, "What are the differences between all these maps?"

Which came first, the blue jay or the oak...



Blue jay

In a hollow by my pond not far from the house is a grouping of three bur oaks. They are all of an age and three or four feet apart. I have wondered how they came to grow there, so close together, as if all planted at the same time, at the edge of a deep woods. They aren't in a

straight line or equidistant so they don't seem to have been tended by a human hand.

I believe I found my answer in an essay in "Living Bird," published by the *Cornell Lab of Ornithology*.

It seems that in the fall blue jays engage in an instinctive and secretive burying behavior. They carry four and five acorns at a time in their mouths to spots at the edge of the forest and bury them as part of their winter cache. If the jay happens not to find all his cache before spring, the acorns are at just the right depth to sprout and survive—sheltered, but not as deeply buried as by a squirrel.

Radio tracking work has found that an individual jay may cache as many as 5000 acorns in a single season, carrying them a distance of more than a mile or sometimes flying from one tree to the next, in spurts of less than 100 yards .

To understand the physiological challenge faced by the jay, you might pop three or five acorns inside your mouth, hold another in your teeth, and run around the block. If the warm-up lap doesn't get your heart racing, spit out the acorns and replace them with coconuts for a more proportionate sense of the jay's burden.



Acorns

In *Oecologia*, *Natural History and Journal of Biogeography*, W.C. Johnson of South Dakota State University has argued "air transport by jays must have been a primary reason for the swift range extensions of oaks and beeches northward up the continent as the ice retreated from North America following the most recent Ice Age. Because their seeds were so often carried to the leading edges of the forest – where jays prefer to cache – oaks and beeches moved north much faster than they could possibly have done without avian assistance".

Other biologists have noted that oaks reach their greatest diversity where jays are also most represented and are absent from areas of the globe that jays don't inhabit.

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