Of California and the Mediterranean:
Rare and Adapted Ecosystems
by Nancy Nies

WHEN PAUL AND I SIGNED UP FOR A “FOLK-DANCE CRUISE” on the Mediterranean in September 2015, we expected to see stunning scenery, to dance on board the ship and to watch local folk dancers perform in various ports of call in Italy and France — and we were not disappointed. We did not, however, expect the added bonus of hearing an informative talk on the climate and vegetation shared by California and the Mediterranean region. The speaker was Wayne Engstrom, Professor Emeritus of Geography at Cal State Fullerton. For those who, like us, might need a primer or refresher on the subject, here are the highlights.

Engstrom first explained how rare Mediterranean ecosystems are, existing on only 2% of the Earth. Sixty percent of those are found in the Mediterranean basin, and the rest on the west coasts of continents in the lower middle latitudes, in Chile, South Africa, Australia, and of course California. Three of the five regions — the Mediterranean basin, central Chile, and central and southern California — have similar landscapes, all being mountainous. They also have similar vegetation. In areas with a Mediterranean climate, summers are hot, with high pressure bringing dry conditions, and winters are wet, due to the arrival of storms brought in by westerlies.

In order to survive hot, dry summers, natural vegetation in Mediterranean ecosystems has adapted to drought, and Engstrom described various adaptations. To reduce water loss, many shrubs are sclerophyllous (“hard-leaved”), meaning that they have developed thick, leathery leaves. Others have adapted with light-colored leaves to reflect the sun’s rays, or
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with extensive root systems to keep leaves green even in drought conditions. Perennial plants, geophytes, store their nourishment in an underground bulb, tuber, corm or rhizome, while annuals evade drought conditions entirely, by going to seed early and then dying. Other survival techniques include developing resistance to fire, as well as to herbivores.

Engstrom then explained the difference between two terms used to describe landscapes in the Mediterranean region, and gave examples of plants found in each. The term maquis, he said, refers to continuous, dense coverage provided by tall, sclerophyllous shrubs and low trees. These include Kermes oak (Quercus coccifera), strawberry tree (Arbutus unedo), Judas tree (Cercis siliquastrum), dwarf fan palm (Chamaerops humilis), Cretan palm (Phoenix theophrasti), sage-leaved cistus (Cistus salviifolius), and oleander (Nerium oleander). The term garrigue, said Engstrom, indicates discontinuous coverage — in hotter, drier areas — provided by low shrubs such as Greek spiny spurge (Euphorbia acanthanthes), rosemary (Rosmarinus officinalis), red tulip (Tulipa doerfleri), and Italian man orchid (Orchis italica).

Wetter, cooler areas may have an oak-conifer woodland including cork oak (Quercus suber), Aleppo pine (Pinus halepensis), cedar of Lebanon (Cedrus libani), and Italian cypress (Cupressus sempervirens).

The California equivalent of maquis - garrigue—which we call chaparral—also relies upon a foundation of sclerophyllous shrubs and plants with drought-resistant character-

istics such as those found in Mediterranean plants. Engstrom also pointed out that agriculture in the Mediterranean basin has traditionally depended upon plants native to the region (or nearby) and adapted to the Mediterranean climate, including grapes, olives, pistachios, and almonds—all of which sound familiar to those of us living here in California’s San Joaquin Valley. Also, Engstrom noted that Californians visiting the Mediterranean region feel at home not only because of the similar landscape, but also because of the familiar plants grown as ornamentals—Mediterranean natives such as oleander and dwarf fan palm, and non-natives like lantana and bougainvillea.

You never know when you’ll get a lesson in native plants—maybe even on a cruise ship! ✿

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Monica, Dorie, Dinah and several members who volunteered at our native plant sale in October at Cal State University. It was very successful and we sold out of the entire stock by mid-morning!

Lucy, Monica, Rob, Diana and others for the very popular “Ditch Your Lawn Workshop” in early November. Over 40 people attended and a great deal of information was exchanged on conserving water with our landscape planning.

Paul Gipe, as always, for keeping us on track at meetings, and for facilitating communication between members.

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