CHECKLIST OF BUTTERFLY AND HUMMINGBIRD (INCLUDING MOTHS)
GARDEN ATTRACTION FACTORS

(Bias by Phil Gordon 4 Mar. 2000, Southern Alameda County, California, U.S.A.)

Season/Flower
   Flowers should include those that are long flowering - Spring to Summer (esp. Perennials); this can also be accomplished with different species of flowers that are similar, and represent a continuous flowering chronological sequence.

Shape
   The ideal (most preferred by hummingbirds) are long, tubular, red flowers. Butterflies prefer flowers with a flat "table" form for feeding and/or resting (i.e. Zinnia sp.). (See below for other attraction factors).

Plants
   Selected "natives" have more nectar, more fragrance, more resistance to drought, more resistance to "bugs" and/or parasites.

Layers
   Create a stepwise layering of shorter plants in front of taller plants. This is more aesthetically pleasing to the human visitors, and offers better flower access and easier locating for butterflies and hummingbirds (most useful for "new arrivals").

Islands
   Some flowers should be set into islands or on mounds to show concentrated colors and/or supplies of fragrance.

Bird Baths
   Bird Bath(s) should be wide and shallow (1/4" in part) (contrary to most types available today). Sound of dripping/running water is most attractive to all birds.

Water Falls/Sprays
   Waterfalls should be about 16" or more with a horizontal outward displacement of six inches or more. This allows the hummingbird to bathe on the wing. Mist makers or sprinklers are most attractive on hot, sunny, days.

   Butterfly "puddling" areas of wet sand and/or mud should be available nearby. Nutrient salts (often sought after) may be introduced, but the state of knowledge for this is very limited. (Careful records should be kept on such experiments).

Feeders/Shelter
   Hummingbird feeders should be stationed in places advantageous for photography and/or study observations.
Butterfly feeders may be established, but competition from other insects needs to be controlled (i.e. ants). Also, having a small reservoir, they dry out sooner and need attention and refillings more often.

Hibernation boxes for butterflies can be established in protective sites.

Third dimensional aspects to gardens can be created with planted trellises or fences with flowering vines (i.e. Passion vine supports Gulf Fritillary larvae), but beware of "invasives" or prune hogs (i.e. Large Trumpet Vines or Pyracantha sp.).

Weed Beds
Plants for butterfly and/or moth larvae should be planted as selected for expected local species (i.e. buckwheats, Coffeeberry, oaks). In corners of some yards/parks raised beds or planters (for plant isolation) can hold weeds or other undesirable invasives that are also food plants for larvae.

Paths
Pathways through garden areas can serve several purposes. Besides access control, dividing up the garden allows greater or controlled flower exposure and flower variety. Benches or Gazebos create the aspect of leisure as well as convenience; they also offer focus or emphasis (i.e., garden goals or themes).

Blooming Periods
Introduction of some early or late blooming cultivars may serve to extend the flowering season beyond an already long season in our mild climate. Migrating hummingbirds can arrive as early as late January. A butterfly species may have two or three hatching seasons per year -- some early and some late. Some adult butterflies live beyond the normal two weeks of life for most butterflies; and they may over-winter, flying out on warmer (even midwinter) days (i.e., West Coast Lady, Morning Cloak).

Nest Stuff
Nesting materials for hummingbirds should be available as natural or provided (served up!) yearlong: pieces of lichen, plant bud scales, leaf bits, moss bits, plant down, needles and spider webs (not to be destroyed). Nesting is often on horizontal limbs of small trees or large shrubs. Recently, artificial nesting gizmos have been sold, to encourage Hummingbird nesting in selected spots (by you). Please let this writer know of any successes.

Beware Cats
Branches in shade for rest perches between nectar feedings should be within 20 - 30 feet of sources. And, like any feeders, out of the way of cats!

Hummingbird Flower Location
Flowers below hedges may be attractive to female hummingbirds since they can feed "out of sight" of territorial males that would drive them away. The female's strategy is to use "trap-line-feeding", going from flower to flower instead of
guarding one spot. Hummingbirds may use 1000 +/- flowers /day; they also drink sap from Sapsucker-bored holes. They also eat lots of gnats; see below:

**Pests**

Gardens should not be too "clean". Fluids or dissolved materials less than appetizing to human tastes may be sought by butterflies and/or moths; such as toad carcasses, animal feces, sap from broken twigs or dying trees (a sap run) and juices from fallen fruit -- the more opportunities, the better! Sensitivity by most parts of hummingbird and butterfly life elements preclude the use of pesticides = NO PESTICIDES! (You don't want hummers taking poisoned insects/spiders for themselves or their young).

**Moth Food Plants**

Moth attracting plants include milkweeds, garden phlox, dame's rocket, flowering tobacco, dogbane, composites (not multi-petaled cultivars, or low fragrance flowers), Willow catkins (flowers), pale pink "scarlet" gilia. 20.Baiting for moths can be accomplished with the following recipe:

**Moth Bait**

Baiting for moths can be accomplished with the following recipe:

- Dark brown sugar 1 lb. Mixed with 1 can beer
- 1 Banana (very ripe) mashed & mixed w/ beer & sugar
- Yeast (Saccharomycetes sp.) pinch

Cover (not seal) jar and set to warm for a few days; paint tree trunks, fence posts. For night viewing revisit bait in 1/2 hour with shielded (yellow cloth) flashlight.

**More Moth Plants**

Other moth attracting flowers (+ =also butterflies) include:
- Primrose (Primrose moth [pink & buff])
- Viburnum (Sphinx moth)
- Snowberry (Sphinx moth)
- Blueberry (Sphinx moth)
- Squash (Squash-vine borer moth)
- Oleander (Moths only)
- Honeysuckle (Lonicera, Family Caprifoliaceae)
- four-o'clock (Mirabilis jalapa, Fam. Nyctaginaceae) (Moths only)
- Lilac (Syringa vulgaris, Fam. Onagraceae) (+ Moths)
- Flowering Tobacco (Nicotinia alata, Fam. Solinaceae) (Moths)
- Garden Petunia (Petunia x hybrida) (+Moths)