

Docket No. 95-095-2
Regulatory Analysis and Development
PPD, APHIS, Suite 3C03
4700 River Road Unit 118
Riverdale, MD 20737-1238

Dear Dr. Flanders, Ms. Knott, and Colleagues:

I would like to thank you for the opportunity to comment on these proposed regulations. I believe that there are some very good provisions in the new regulations. We are also concerned with some of the species that are currently listed in the regulations under Sec. 330.202(c)(1).

These comments were prepared by Scott Hoffman Black and are submitted on behalf of the Xerces Society. The Xerces Society is an international nonprofit organization dedicated to protecting biological diversity through the conservation of invertebrates. We have over 5,000 members throughout the United States. Scott Hoffman Black, Executive Director, has degrees in plant science, entomology, and ecology.

IMPACT OF THE REGULATIONS ON POLLINATORS

I first want to thank you for including language about limiting the release of organisms that could harm "important" pollinators. This is a good first step. It is difficult, if not impossible, to estimate the value of insects to human society in terms of dollars and cents. Estimates of the economic importance of pollinators vary:

- Donald Borror et al. (1992) estimated that pollinator services of insects are worth about \$19 billion annually in the United States.
- Pimental et al. (1997) estimated that the benefit of pollination services provided by all insects (including honey bees) is approximately \$40 billion per year in the U.S.
- Pollination services by insects other than honey bees are also important. Non-honey bee pollinators are responsible for the successful production of approximately \$3 billion (\$6 billion, if alfalfa hay production for cattle is included) worth of agricultural products in the United States in 1998 (based on data from Morse and Calderone, 2000).

Pollinators are important not just for human needs. They are often considered keystone species, as their presence in an ecosystem ensures the continued reproduction and survival of plants, and in turn the other wildlife relying on these plants. The importance of pollinator services to ecosystem and economic health is well documented (Sobeich and Savignano, 2000):

- Animal pollinators are needed for the reproduction of 90% of flowering plants (Buchmann and Nabhan, 1996; Free, 1970 *In* Tepedino, 1979; and McGregor, 1976 *In* Tepedino, 1993).

- Pollinators support biodiversity, as there is a positive correlation between plant diversity and pollinator diversity (Heithaus, 1974 *In* Tepedino, 1979; Moldenke, 1975 *In* Tepedino, 1979; del Moral and Standley, 1979 *In* Tepedino, 1979).
- The elimination, replacement or reduction of a specific species of pollinator may result in the decline of a specific plant species, which in turn may affect relative plant abundance, and hence community dynamics (Tepedino, 1979; Buchmann and Nabhan, 1966; and USEPA, 1998b) and impact wild animals and humans that depend on those plants (Buchmann and Nabhan, 1996; and Kevan, 1977 *In* Allen-Wardell et. al., 1998).

Today, alarming declines in the health and populations of pollinators poses a significant threat to the integrity of biodiversity, to global food webs, and to human health and survival. As a result:

- Disruption of pollinator systems and declines of certain types of pollinators has been reported on every continent except Antarctica...The overall picture is of a major pollination crisis. (C. Kearns, D. Inouye and N. Waser, 1998)
- An estimated 62% of all flowering plants may be suffering reduced regeneration from seeds as a result of pollinator scarcity (Burd, 1994).
- The number of commercially managed honey bee colonies in the U.S. has declined from 5.9 million in the 1940's to 4.3 million in 1985 and 2.7 million in 1995 (Ingram et. al., 1996b *In* Kearns et. al., 1998). Feral honey bees are essentially gone in the U.S. (Watanabe, 1994).

It is essential that we actively conserve a diversity of pollinators in order to preserve the quality of human and all other species of life.

We believe that it is difficult to place a value or relative "importance" on pollinators. Are some pollinators more "important" than others? It may be good to turn the question around to ask, which pollinators are NOT important? It is impossible to differentiate between the importance of different pollinators to crops and native plants as the relationships between many plants and their pollinators have not been studied. Given this, any decision to pronounce one pollinator more important than another will be flawed. They are all important.

Again, we would like to commend you for including the impact of pollinators in the regulations. These regulations need to recognize the importance of both managed and unmanaged pollinators. We believe that if you review the scientific literature on pollinators you would determine that ALL pollinators are "IMPORTANT" and that all pollinators should be considered when allowing movement of organisms across state lines.

REQUIREMENTS FOR THE RELEASE INTO THE ENVIRONMENT OF REGULATED ORGANISMS.

We agree fully with Sec. 330.203: Requirements for the release into the environment of regulated organisms. The regulations list species that are not considered to be pests, and which "may be moved within the continental United States without a permit if they are

moved from populations located within the continental United States." The movement of everything else is regulated.

We believe this is a positive move as opposed to the other way round, where a short list of problem species is regulated, and there is then endless debate over whether other pest species should or should not be added to the list.

DETERMINATION OF WHAT SPECIES SHOULD BE INCLUDED ON THE SEC. 330.203 LIST

Lately, the subject of releasing butterflies far from their place of origin has become a charged and controversial topic. We have concerns about the practice of shifting butterflies from one place to another. Genetics and disease have both been raised as serious issues with transfers; the well founded fear of introducing pathogens or unhelpful genes into local populations. The other problem stems from transfers leading to false recording of native butterflies in regions in which they may not normally be found, or in numbers that would lead scientists and other observers to reach misleading conclusions about population sizes or health. Butterflies observed in locations that they have not reached under their own power can badly confuse our picture of species' normal whereabouts or movements.

We are glad to see that regulations governing transfers of the Monarch (*Danaus plexippus*) are not specifically addressed in these rule changes. Although we DO NOT oppose the local rearing and local releases of monarchs in school and research projects, we DO oppose the extensive transportation and releases of monarch butterflies (and other butterflies) in areas widely removed from their point of natural origin.

We are also glad to see the regulations governing transfers of coccinellids, i.e., lady bird beetles, are not specifically addressed in these rule changes. Coccinellids are widely imported from around the globe and are reportedly overwhelming native species with little or no benefit to the unsuspecting people who buy them. Although I do not have the data to confirm their impact at this time, I would be glad to pull together a literature review within the coming month if that will help in drafting final regulations.

We are however, concerned by the rule in section 330-302 that would eliminate the need for a permit to move the following Lepidoptera: *Actias luna*, *Antheraea polyphemus*, *Citheronia regalis*, *Eacles imperialis*, *Hyalophora cecropia*, *Hyalophora euryalis*, *Hyles lineata*, *Manduca sexta*, *Manduca quinquemaculata*, *Vanessa atalanta*, *Vanessa cardui*, and *Vanessa virginiensis*.

If these butterflies are deregulated such that their movement and release are allowed anywhere, anytime, the opportunity will simply be forfeited forever to understand them properly. Very real pest concerns apply, as well, for some of the species involved. In sum, we recommend withdrawal of the proposed rule changes as they relate to the above Lepidoptera species mentioned species.

Thank you for your consideration of my comments.

Sincerely,

Scott Hoffman Black
Executive Director

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