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**Written Testimony of Conservation Law Foundation**
**Before the Joint Committee on Environment, Natural Resources and Agriculture**
**Concerning Bills Relating to Pollinator Health (H. 731, H. 3417, and H. 655)**

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Conservation Law Foundation ("CLF") is pleased to offer this written testimony to the Joint Committee on Environment, Natural Resources and Agriculture. CLF strongly supports legislation that would protect the health of pollinators in the Commonwealth.

CLF is a nonprofit, member-supported regional environmental organization working to conserve natural resources, protect public health, and promote thriving communities for all in the New England region. CLF supports agriculture in the Commonwealth for the many health, environmental, and economic benefits it provides our communities.

*Background*

Honey bees play a critical role in agricultural production. One in every three bites of food we eat depends on a crop that is pollinated by honey bees. Pollination is what happens when a pollinator (often a honey bee) visits a flower and transfers pollen from the male parts to the female parts. By doing this, the pollinator fertilizes the plant and allows the plant to reproduce and create a seed or a fruit.

Despite the honey bees' importance to our food system, bees are dying worldwide at record high numbers. In 2013, commercial beekeepers in the US reported average annual hive losses of around 50 percent, with some suffering losses as high as 100 percent. A national United States Department of Agriculture survey indicated that Massachusetts was one of the states with the highest colony loss rates in the country, at an average of 52 percent.[1]

[1] Bee Informed National Management Survey of 2014-2015, States by Losses, BEE INFORMED PARTNERSHIP, APIARY INSPECTORS OF AMERICA, & UNITED STATES DEPARTMENT OF AGRICULTURE, *available at* http://beeinformed.org/wp-content/uploads/2015/09/StateByLosses-RF.pdf.

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An increasing number of studies point to a certain class of pesticides, known as neonicotinoids, as a primary culprit in the global pollinator crisis.[2] Neonicotinoids are synthetic chemical insecticides that are used to control crop and plant pests such as aphids or leaf beetles. These insecticides are systemic, meaning that the chemicals are absorbed and transported throughout the plant. Because these chemicals are systemic and absorbed into plant tissues, insects that rely on nectar, pollen, or other floral resources have increased oral exposure to residues of neonicotinoids. Honey bees exposed to heavy doses of neonicotinoids are killed immediately. This occurred in 2013 when 50,000 bees were killed because of a high dose of neonicotinoids sprayed on blooming linden trees in a Target parking lot in Oregon.[3] But honey bees exposed to even small levels of neonicotinoids can experience problems with flying and navigation, reduced taste sensitivity, and slower learning of new tasks, all of which hinder their ability to pollinate.

Neonicotinoids are used widely across New England for commercial and home uses. Blueberries, potatoes, apples, and certain vegetables are often treated with neonicotinoids. Homeowners, often unaware of the harm to pollinators, apply products containing neonicotinoids onto their lawns and gardens. A recent scientific study found significant traces of neonicotinoids in 70% of Massachusetts' honey samples taken from 10 out of 14 Massachusetts counties.[4]

Other identified contributing factors to the decline in honey bee health include disease (most commonly, the pathogen nosema), parasites (most commonly, the varoa mite), fungicides, and loss of habitat. Although scientists are still unclear how much each factor contributes to honey bee decline, the time is ripe for the Commonwealth to address known factors that we can control, such as the use of neonicotinoid insecticides.

*Regulation to Protect Pollinators*

Given the many stressors on pollinators, CLF commends the Legislature for taking action to protect pollinator health in the Commonwealth. There are three different bills before this Committee relating to pollinator health (H. 731, H. 3417, and H. 655). Rather than moving

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[2] G.E. Budge et al., "Evidence for pollinator cost and farming benefits of neonicotinoid seed coatings on oilseed rape," SCIENTIFIC REPORTS 5, (2015), *available at* http://www.nature.com/articles/srep12574 (providing evidence confirming the link between neonicotinoid pesticides and continually increasing honey bee colony losses on a landscape level); *see also* "What the Science Shows," Beyond Pesticides Website, http://www.beyondpesticides.org/pollinators/research.php; Larissa Walker, "Pollinators and Pesticides," pp. 6-8, Center for Food Safety, Sept. 2013, *available at* http://www.centerforfoodsafety.org/files/pollinatorreport_final_19155.pdf.

[3] "50,000 Bumblebees Dead After Neonicotinoid Pesticide Use in Oregon," Beyond Pesticides Daily Blog, June 24, 2013, *available at* http://www.beyondpesticides.org/dailynewsblog/2013/06/50000-bumbles-found-dead-in-oregon-due-to-neonicotinoid-pesticide/.

[4] Chensheng (Alex) Lu, Chi-Hsuan Chang, Lin Tao, and Mei Chen, "Distributions of neonicotinoid insecticides in the Commonwealth of Massachusetts: a temporal and spatial variation analysis for pollen and honey samples," ENVIRONMENTAL CHEMISTRY, July 23, 2015.

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forward with just one bill, CLF urges this Committee to create one merged bill that draws upon the various elements of the three proposed bills. An effective law to protect pollinator health is one that creates a committee to continually study the issue, and also takes swift action to regulate the use of neonicotinoid insecticides in the Commonwealth.

a. Creating a Pollinator Health Advisory Committee

This Committee should draft a bill that creates a committee to study regulations and policies relating to pollinator health. Two bills before this Committee (H. 731 and H. 3417) both propose to create such bodies. The main difference between the two is that H. 731 proposes that the committee study *existing* regulations, whereas H. 3417 proposes that the committee investigate methods and solutions from around the country and world to prevent bee colony collapse. CLF urges this Committee to combine the bills and create a committee charged with both of these responsibilities. In time-sensitive predicaments such as this, it is valuable to study the efficacy of our existing policies. However, it is equally important to explore alternative policy measures as well as study pesticide regulations from *other* states and countries that are more protective of pollinator health, as required by H. 3417. As indicated in H. 3417, this Committee should also identify possible funding streams for efforts to promote or protect pollinator health and investigate the means used by other states to gather data on populations of bees.

Both H. 731 and H. 3417 recommend slightly varying compositions of the committee; CLF is supportive of either approach. CLF also supports the imposition of a set deadline (either June 30, 2016 or within 18 months of the bill passage) by which the committee would be required to report to the Legislature on its findings.

b. Neonicotinoid Regulation

This Committee's merged bill to protect pollinator health should also increase regulation of neonicotinoid insecticide application and the sale of products treated with neonicotinoids. Toward this end, CLF fully endorses the requirements set forth in H. 655, including the restriction of neonicotinoid use to certified or licensed applicators. Massachusetts would not be alone in proposing a bill that restricts neonicotinoid use. France, Germany, Italy, and Slovenia have partially banned the use of neonicotinoids.[5] In 2013 the European Commission adopted European Union-wide restrictions on three types of neonicotinoids.[6] In the past year, the Alaska and Maryland Legislatures have both contemplated such a bill.[7] In fact, several states, including Maine, New York, New Jersey, and Vermont, have gone so far as to propose banning

[5] "What Are Neonics," Pesticide Action Network UK, *available at* http://bees.pan-uk.org/neonicotinoids.
[6] "Bee Health: EU-wide restrictions on Pesticide use to enter into force on 1 December," European Commission Press Release, May 2013 *available at* http://europa.eu/rapid/press-release_IP-13-457_en.htm
[7] Maryland, HB605, "Pollinator Protection Act of 2015"; Alaska, HB.20 "An Act Limiting the Application of Neonicotinoid Pesticides."

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neonicotinoids.[8] Furthermore, such a bill would still allow farmers who rely on neonicotinoids for crop production to use them as long as the farmers are properly trained and licensed.

In summary, CLF believes that the current crisis with honeybee health warrants not only the creation of a committee to study the problem and investigate solutions, but also immediate action to regulate the use of neonicotinoids, a documented major stressor on honeybee health. By pulling requirements from all three bills before this Committee, the Massachusetts Legislature would be taking important and justifiable actions to protect pollinator health.

Thank you for the opportunity to provide testimony on the subject of pollinator health. Conservation Law Foundation is available to answer any questions the Committee might have about these comments.

Sincerely,

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[8] Maine, LD 1587, "An Act to Temporarily Ban the Use of Neonicotinoid Pesticides"; New York, S4833, "An Act Prohibiting the Use of Neonicotinoid Class of Pesticides"; New Jersey, A4349 "An Act Prohibiting Use, Sale, Offer for Sale of Neonicotinoid Pesticides"; and Vermont, H236 "An Act Banning the Use, Sale, or Application of Neonicotinoid Pesticides."