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Government Launches Full-Scale Lovebug Response to Minimize Public Disruption

- Microbial agent to eliminate larvae being deployed at key sites across Seoul, Incheon, and Gyeonggi-do
- Full-scale response preparations underway, including drones, traps, and insect vacuums for adult control
- MCEE to lead coordinated response with local governments and experts until the end of the mass outbreak period

The Ministry of Climate, Energy and Environment (MCEE, Minister Kim Sungwhan) announced that it will implement the "2026 Lovebug Mass Outbreak Response Measures" to minimize public inconvenience caused by the Plecia longiforceps ("lovebug"), which appears in large numbers primarily across the Seoul metropolitan area (Seoul, Incheon, and Gyeonggi-do) every year from June to July, causing discomfort and disruptions to daily life.

Lovebugs undergo a larval stage through late May and tend to emerge in large numbers all at once after developing wings from mid-June to mid-July.

Since 2022, mass outbreaks have been observed mainly in western Seoul. In particular, a large outbreak occurred last year at Gyeyangsan Mountain in Incheon, causing public inconvenience by obstructing hikers' passage and leading to the accumulation of insect carcasses.

The MCEE will strengthen its response to prevent a recurrence of mass

outbreaks like last year's incident at Gyeyangsan Mountain by proactively reducing populations from the larval stage and immediately applying environmentally friendly, physical control measures during the adult stage. The key measures are as follows.

2026 Lovebug Mass Outbreak Response Measures

(1) (Before a mass outbreak) Proactive response from the larval stage

① Reduce larval populations through "biological control" using soil bacteria

The MCEE is conducting field demonstrations using a microbial agent (Bti)*, which has been proven effective against species similar to lovebugs, to control populations starting from the larval stage.

* A bacterium found in soil, currently used in Korea to eliminate mosquito larvae, and confirmed through laboratory studies to be effective against species similar to lovebugs.

To date, in cooperation with local governments and based on past complaint patterns, the measure has been applied on a priority basis at three sites in Seoul (Baengnyeonsan Mountain in Eunpyeong-gu, and Suraksan and Buramsan Mountains in Nowon-gu) and one site in Incheon (Gyeyangsan Mountain in Gyeyang-gu). Field demonstrations have also confirmed a certain level of effectiveness in reducing larvae.

Accordingly, the MCEE plans to expand application to Seo-gu in Incheon and the cities of Gwangmyeong, Anyang, Bucheon, Goyang, and Siheung in Gyeonggi-do, taking into account local government demand and the likelihood of mass outbreaks in areas with a history of frequent complaints.

② Strengthen mass outbreak forecasting and information sharing through advance larval monitoring

Preparedness capabilities will be strengthened by expanding advance

monitoring efforts, including larval habitat monitoring and the use of information from the Korea Pest Control Association (KPCA).

First, to assess the spread of lovebugs and provide information to relevant agencies, including local governments, the MCEE and the Seoul Metropolitan Government conducted a survey of larval habitats from March to April across 56 cities, counties, and districts in Seoul, Incheon, Gyeonggi-do, and adjacent areas (Gangwon-do, Chungcheongnam-do, and Chungcheongbuk-do).

* According to the survey, larvae were found at all surveyed sites in Seoul and Incheon except one. In Gyeonggi-do, larvae were confirmed in 15 of the province's 31 cities and counties (no larvae were found in Gangwon-do, Chungcheongnam-do, or Chungcheongbuk-do).

In particular, larvae were discovered in the three northern Gyeonggi-do areas of Dongducheon, Pocheon, and Yeoncheon-gun, where adult lovebugs had not previously been observed. Accordingly, the survey results were shared with the newly affected local governments, and they were advised to make advance preparations, including securing response personnel and equipping pest control equipment.

In addition, through cooperation with the KPCA, a system has been established to immediately share sightings of lovebugs from frontline pest control sites with relevant agencies, enabling rapid monitoring across a wider area.

The results of advance monitoring will be promptly shared with local governments and other frontline response agencies, while nearby residents will be provided with guidance, including avoiding entry into areas experiencing mass outbreaks.

(2) (Adult emergence stage) Immediate deployment of environmentally friendly, physical control measures

① Deploy water-spraying drones and portable insect vacuums

During the adult emergence period, the MCEE will conduct a pilot deployment at Gyeyangsan Mountain of drones that simultaneously spray water and air to impair the flight ability of lovebugs and induce them to fall.

* A downward-spraying drone equipped with a 70-liter water tank

The drones will be intensively operated at the summit area of Gyeyangsan Mountain during the mass outbreak period (approximately 10 days), with on-site safety measures, including access restrictions, implemented concurrently to prevent accidents during drone operations.

In addition, on-site response mobility has been further enhanced by immediately deploying portable insect vacuums to outbreak hotspots, enabling direct capture and removal through suction.

② Significantly expand light- and attractant-based traps and rapidly deploy them to outbreak hotspots

Collection equipment previously used to remove adult lovebugs has been improved and expanded. Light-based traps that take advantage of the insects' attraction to light have been upgraded with increased capacity to improve collection efficiency, while traps equipped with floral scent-like attractants have been significantly expanded.

The secured equipment will be rapidly deployed to outbreak hotspots based on outbreak conditions to strengthen on-site response capabilities during mass emergence events.

* (2025) 21 small light-based traps and 12 attractant traps (one type of attractant) → (2026) Four large light-based traps, 11 small light-based traps, and 3,850 attractant traps (three types of attractants)

(3) Institutionalize a management framework for "mass outbreak insects" to

establish a foundation for ongoing response

Through amendments to the Wildlife Protection and Management Act (amendment bill passed by the National Assembly plenary session on May 7, 2026), the MCEE established a legal definition of "mass outbreak insects"* and institutionalized a framework enabling the national and local governments to systematically manage them through measures such as investigating outbreak status and damage scale, establishing monitoring systems, and providing pest control budgets and personnel support. This has laid the institutional foundation for the systematic management of mass outbreak insects, including lovebugs.

* Insects that emerge in large numbers as clustered populations in specific areas due to climate or environmental changes and require management because they cause damage to living conditions, public facilities, transportation safety, and related areas.

Launch and maintain continuous operation of the interagency response consultative body (from May 21)

① Strengthen interagency response coordination system

The MCEE plans to expand and operate the "Mass Insect Outbreak Response Consultative Body" ("Response Consultative Body") to ensure affiliated agencies, subordinate organizations, local governments, and other relevant institutions strengthen preparedness and can respond immediately from the early stages of a mass outbreak.

* The MCEE will oversee the overall response, including monitoring mass outbreaks and pest control status, requesting pest control and other response measures from relevant agencies, and coordinating personnel and equipment. The Response Consultative Body consists of local governments, affiliated agencies of relevant ministries, experts, and the KPCA.

This year, the Response Consultative Body has expanded its scope beyond the Seoul metropolitan area (Seoul, Incheon, and Gyeonggi-do), where adult

lovebugs had previously appeared, to include adjacent regions (Gangwon-do, Chungcheongnam-do, and Chungcheongbuk-do), while also incorporating agencies affiliated with the Korea Forest Service and the KPCA to consolidate response capabilities.

② Hold interagency pre-inspection meetings and maintain continuous operation until the end of the mass outbreak period

On May 21, the MCEE will hold the "Kickoff Meeting of the Mass Insect Outbreak Response Consultative Body" at the Samkyung Education Center (located in Yongsan-gu, Seoul), chaired by Lee Chae-eun, Director General for Nature Conservation Bureau at the MCEE, to ensure the Response Consultative Body effectively implements lovebug mass outbreak response measures in the field.

The Response Consultative Body will remain in continuous operation until the end of the mass outbreak period. Before adult emergence begins, it will conduct weekly situation reviews and, upon signs of a mass outbreak depending on outbreak developments, will swiftly transition to a daily management system.

From mid-June through July, during the mass outbreak period, an "Intensive Management Period for Mass Insect Outbreaks" will be operated, and a field response team will be activated within the Response Consultative Body to enable immediate action based on outbreak and damage patterns caused by mass outbreak insects.

Minister Kim Sungwhan stated, "With the recent persistence of hot weather, public concern over mass lovebug outbreaks is growing." He added, "If a mass outbreak occurs, inconvenience could spread to people's daily lives and commercial activities. We will therefore respond proactively from the larval stage and actively address the discomfort and disruptions experienced by the public through thorough advance preparations."