

II. Insekten-Konferenz von DGaaE und DPG



INSEKTEN KONFERENZEN

Veränderung der Artenvielfalt, Monitoring und Maßnahmen für den Schutz von Insekten

10. September 2018

Universität Hohenheim, Hörsaal Ö2

Biologiezentrum I und II, Garbenstraße 30

Programm & Bericht

insektenvielfalt.phytomedizin.org

Veranstalter

Die Tagung wird in einer Kooperation der Deutschen Gesellschaft für allgemeine und angewandte Entomologie e.V. und der Deutschen Phytomedizinischen Gesellschaft e.V. durchgeführt.

Programm-Komitee

Jürgen Gross & Michael Schade
Deutsche Gesellschaft für allgemeine und angewandte Entomologie e.V. (DGaaE), Göttingen



Falko Feldmann & Johannes Hallmann
Deutsche Phytomedizinische Gesellschaft e.V. (DPG), Braunschweig



Registrierung

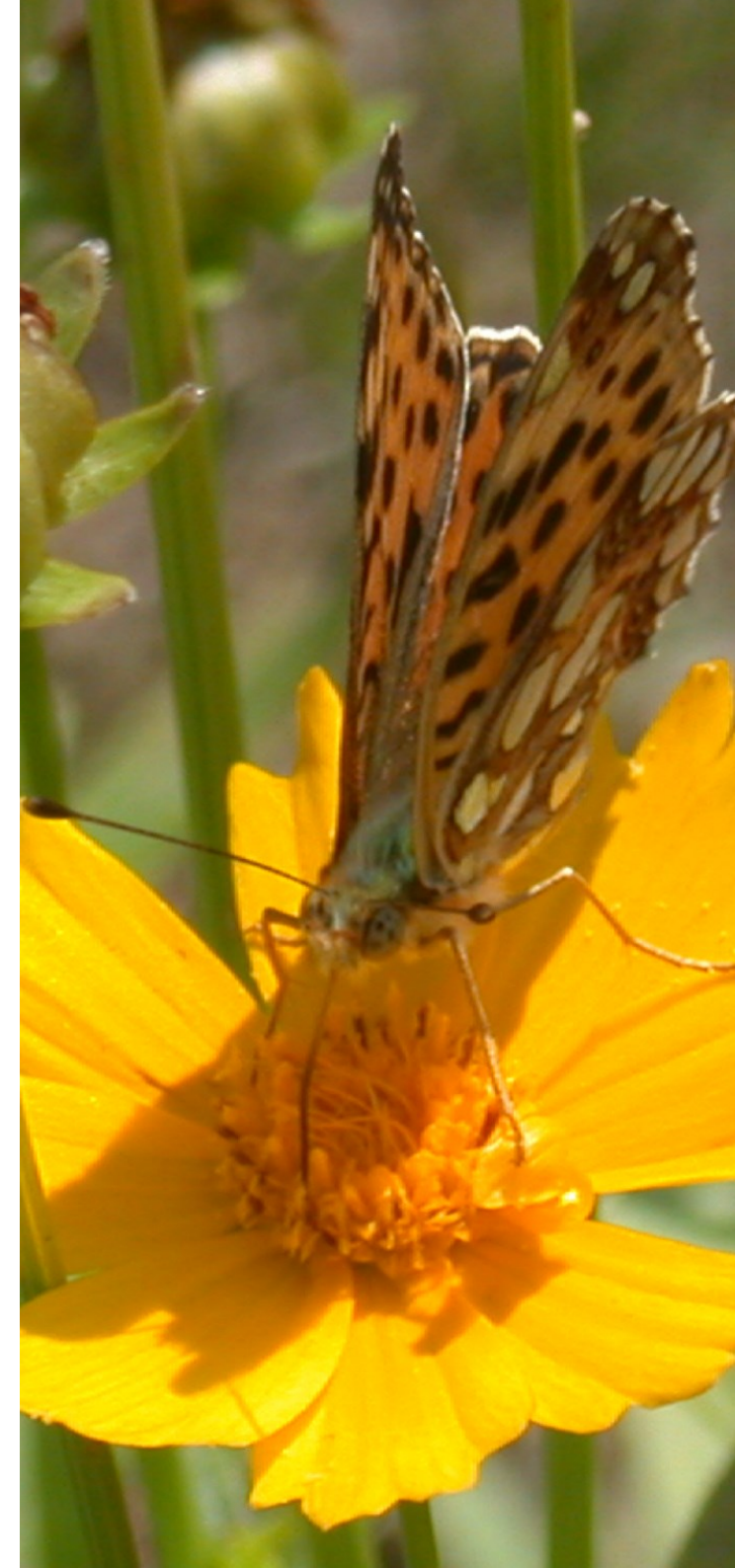
Wir erheben keine Tagungsgebühr; Die Registrierung auf der Tagungswebsite ist möglich zwischen dem

15. Juli und 07. September 2018.

Die Tagungssprache ist Deutsch.

Die Insektenkonferenzen

DGaaE e.V. und DPG e.V. führen ihre Symposiumsreihe „Insekten-Konferenzen“ in zweijährlichem Abstand durch. Spezialisten und Interessierte aus Verbänden, Forschung, Industrie und Behörden finden hier ein Dach für ihren themenbezogenen Austausch über die Artenvielfalt, das Monitoring und Maßnahmen für den Schutz von Insekten in der Agrarlandschaft und im urbanen Raum. Die Ergebnisse der Tagung werden in deutscher Sprache auf der Tagungswebsite und eine Zusammenfassung in englischer Sprache im Journal for Plant Diseases and Protection veröffentlicht.



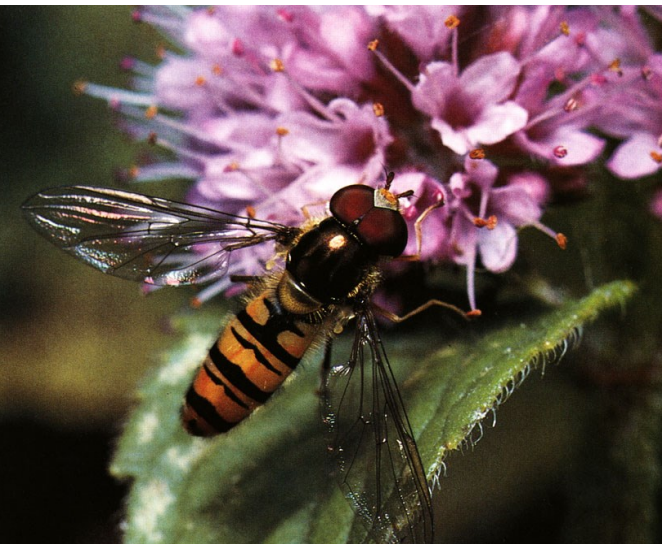
Tagungsthema

Aktuelle Langzeitstudien aus Europa, Nordamerika und anderen Teilen der Welt zeigen einen weit verbreiteten, dramatischen Rückgang an Insekten. Ihnen folgt bereits in manchen Regionen ein Artenrückgang in der Vogelwelt.

In der Öffentlichkeit werden neben Klimaveränderungen, invasiven Arten, Lichtverschmutzung und fortschreitender Habitatszerstörung auch eine industrielle Landwirtschaft, die durch Intensivierung und Stoffeinträge (Stickstoff, Pflanzenschutzmittel) den Lebensraum von Insekten beeinträchtigen kann, dafür verantwortlich gemacht. Selbst Fernwirkungen von Pflanzenschutzmitteln bis in Schutzgebiete hinein sind im Gespräch.

Für Wissenschaftler stellt sich die Lage kompliziert dar: wie beschreibt man den Verlust von Insekten (Artenzahl, Biomasse) korrekt, welche Methoden eignen sich, ihre Verteilung zu messen, welche bereits vorhandenen Daten könnten zusammengezogen werden, um Schlüsselursachen klar erkennbar zu machen?

Vor diesem Hintergrund treffen sich Wissenschaftler aus Forschung, Industrie und Behörden zu einem konstruktiven und ideologiefreien Gedankenaustausch über die Situation in Deutschland. Können wir konkrete Ursachen für den Insektenrückgang feststellen, erste Auswirkungen nachweisen? Welche Gegenmaßnahmen sollten möglichst schnell ergriffen werden?



10.06.2018

- 09:30 Begrüßung**
Prof. Dr. Johannes Hallmann (DPG)
PD Dr. Jürgen Gross (DGaaE)

Sektion 1: Perspektiven

(Leitung: Jürgen Gross, DGaaE)

- 10:00 Der Insektenrückgang aus bundesweiter Perspektive**
Prof. Dr. Beate Jessel (Präsidentin des Bundesamtes für Naturschutz, Bonn)
- 10:30 Erfahrungen aus der Politikberatung: Vom Bestäuberbericht des Weltbiodiversitätsrates (IPBES) bis hin zu insektenbezogener Pressearbeit und Transfer zu Verbänden, Parteien und Parlamenten**
Prof. Dr. Josef Settele (Helmholtz-Zentrum für Umweltforschung - UFZ, Halle)
- 11:00 Insektenrückgang und biologische Vielfalt aus der Perspektive der Nützlinge**
Dr. Olaf Zimmermann (Landwirt. Technologiezentrum Augustenberg, Karlsruhe)
- 11:30 Einfluss der modernen Pflanzenproduktion aus Perspektive der Bienen**
Dr. Klaus Wallner (Landesanstalt für Bienenkunde, Universität Hohenheim)

- 12:00 Diskussion**

- 12:30 Pause**

Sektion 2: Monitoring der Artenvielfalt

(Leitung: Michael Schade, DGaaE)

- 13:30 Monitoring von Insekten in ackerbaulich genutzten Flächen**
Dr. Udo Heimbach (Julius Kühn-Institut, Braunschweig)
- 14:00 Regulatorische Aspekte: Wie Insekten/Arthropoden im Risiko-Assessment und in ökotoxikologischen Tests adressiert werden**
Martin Urban (Syngenta, Basel)

Programm

10.06.2018

- 14:30 Forschungsansätze der Industrie zur Aufklärung des Insektenrückgangs**
Dr. Christian Maus (Bayer AG, Monheim)

- 15:00 Diskussion**

- 15:30 Kaffeepause**

Sektion 3: Maßnahmen zur Förderung der Artenvielfalt von Insekten

(Leitung: Falko Feldmann, DPG)

- 16:00 Insektenmangel in Agrarlandschaften – Pflanzenschutzmittel-bezogene Ursachen, Auswirkungen und Gegenmaßnahmen**

Klaus Swarowsky (Umweltbundesamt, Dessau)

- 16:30 Insect Respect – für eine nachhaltige Transformation der Biozid-Branche und der Wirtschaft**

Dr. Hans-Dietrich Reckhaus (Reckhaus GmbH, Bielefeld)

- 17:00 Diskussion**

- 17:30 Abschlussdiskussion**
(Leitung: Falko Feldmann (DPG))

- 18:00 Ende der Veranstaltung**



Report of the symposium

Falko Feldmann

Current long-term studies from Europe, North America, and other parts of the world show a widespread and dramatic decline in insects. This decline is followed by a reduction in bird species in some regions.

In the public eye, besides climate change, an industrial agriculture that restricts the habitat of insects is held responsible for the decrease in insect numbers. Also, there are discussions about the far-reaching effects of pesticides, even reaching protected areas.

For scientists, the situation is complex: how can they accurately describe the loss of insects, which methods are suitable for measuring their distribution, and which existing data could be combined to clearly identify key causes?

Against this backdrop, scientists from research, industry, and authorities come together to exchange thoughts about the situation in Germany. Can the causes for the decline in insects be identified here, can initial effects be proven, and can this lead to real countermeasures?

Insects, as the most diverse class in the animal kingdom, significantly contribute to the extent of biodiversity in all habitats worldwide. At the same time, many species have considerable economic importance, as insects can act as pests in plant cultivation and storage, vectors of diseases, or provide multiple invaluable ecosystem services as pollinators, food for birds, reptiles, or amphibians, and natural enemies of harmful organisms. It is therefore alarming that numerous studies worldwide have confirmed a fundamentally declining trend in the diversity and biomass of insects over the past decades.

Following the publication of the widely cited "Krefeld Study" (Hallmann & al, 2017), which documented a decline in the biomass of flying insects in Malaise traps in various areas of Germany, the issue of insect decline, long known among entomologists, is now being discussed in public under the terms "insect decline" or "bee decline" and is receiving increasing media attention.

As a professional organization whose statutory goal is to promote knowledge about entomology and research on entomological issues, the German Society for General and Applied Entomology (DGaaE) plays a significant

role in the current discussion on the protection of insect diversity and biomass. The society encompasses all branches of fundamental and applied entomology, including activities related to the control of harmful and the promotion of beneficial arthropods, as well as measures for the protection of insects and the preservation of their habitats.

In this context, in September, prior to this year's plant protection conference at the University of Hohenheim, DGaaE, in collaboration with the German Phytomedical Society (DPG), organized a workshop on insect diversity. The workshop covered aspects ranging from entomological faunistics to potential decisions for the protection of insects requiring political implementation. The DGaaE website (www.dgaae.de) contains a link to the program with all keynote speeches. The well-attended event with approximately 150 participants brought together numerous representatives from entomology, universities, research institutions, nature and environmental conservation, agriculture, beekeeping, agricultural authorities, pesticide, and biocide manufacturers. The purpose of this factually conducted meeting was to initiate discussions on presenting various aspects of the complex issue of insect decline, better networking the stakeholders, and developing approaches for collaborative activities.

The workshop clearly demonstrated that in the current public discussion, the issue of insect decline is primarily associated with the use of pesticide agents, such as Glyphosate or neonicotinoids. However, the application of chemical pesticides is just one factor among many in a long-term trend. At the landscape level, the decline of insect habitats is also influenced by the lack of edge structures and fallow areas, the expansion of large fields, the absence of crop rotation, and increasing land consumption.

Intensive agricultural practices with rising fertilizer use and the observed "grassing over of grasslands" for grass silage production instead of the previously customary haymaking, which has no value for wild bees and other insect species, are additional factors playing a significant role in the decline of insect diversity.

In urban and village areas, the original flower-rich front gardens, as well as vegetable and fruit gardens established for self-sufficiency in post-war Germany, are disappearing. Following a new trend, these are increasingly being replaced by low-maintenance gravel and mulch

areas that offer no habitat for insects.

Other factors, such as environmental and light pollution, increasing traffic, invasive species, and climate change, also contribute to the decline of insect diversity. During the contributions and discussions of the workshop, potential solutions were also presented, which should involve all stakeholders – from private gardeners to farmers, urban planners, and the political level that needs to create binding incentives and guidelines for promoting insect diversity. In agriculture, a long-term program of "field enrichment" is required, recognizing the value of insect diversity and refraining from considering edge structures as harvest losses. In urban areas, apart from providing flowering plants, there are various other possibilities to reduce the loss of insect species, including continued efforts to sensitize the population to nature and insect diversity.

However, the workshop also highlighted the challenge of connecting the known factors contributing to the decline of insect diversity with the necessary actions and consequences. Sustainable food production that conserves biodiversity may be more expensive, and creating nature-friendly urban spaces may require investments in maintenance and care. Despite the increased public and political awareness of the issue, implementing the required measures remains difficult.

Nevertheless, it is high time to take more action to protect the diversity of our native insects. Long-term initiatives, new structures, and a fundamental shift in thinking are necessary to first halt the decline in insect species' diversity and biomass. Reversing the trend to achieve an increase will likely take decades, if it can be achieved at all.

Hallmann, C. A., Sorg, M., Jongejans, E., Siepel, H., Hofland, N., Schwan, H., Stenmans, W., Müller, A., Sumser, H., Hörrén, T., Goulson, D. & de Kroon, H., (2017): More than 75 percent decline over 27 years in total flying insect biomass in protected areas. *PLoS ONE* 12(10): e0185809. <https://doi.org/10.1371/journal.pone.0185809>