

Megachile sculpturalis

Accroissement de l'aire de répartition géographique et écologie

Benoît Geslin



Les abeilles sauvages

17 000 à 25 000 espèces d'abeilles dans le monde

~ 970 espèces d'Apoidea apiformes décrites en France (Liste rouge IUCN).



Violette Le Féon, Morgane Folschweiller, Floriane Flacher and Benoît Geslin

Les abeilles sauvages



Les abeilles sauvages



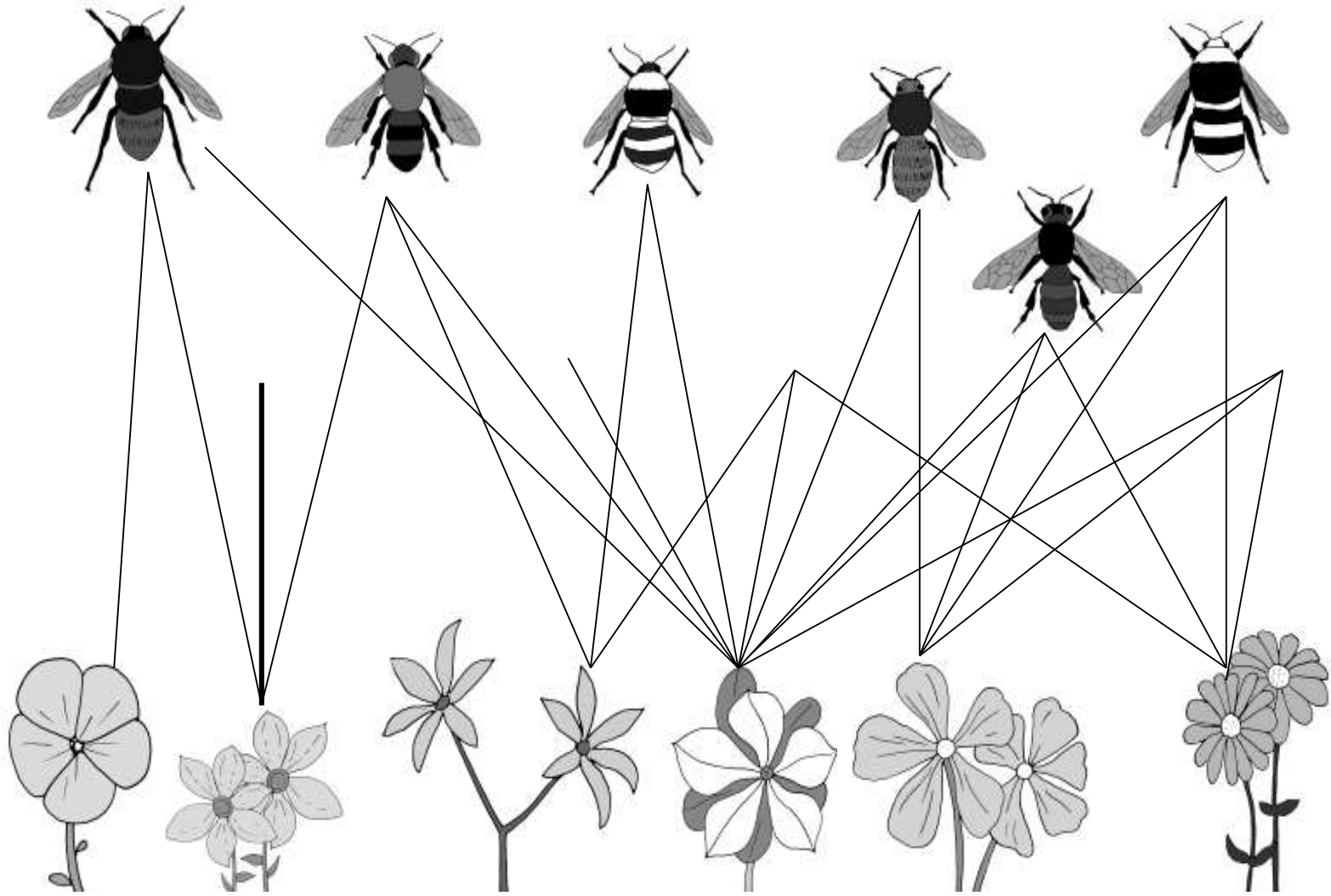
Les abeilles sauvages



Les abeilles sauvages



Les abeilles sauvages



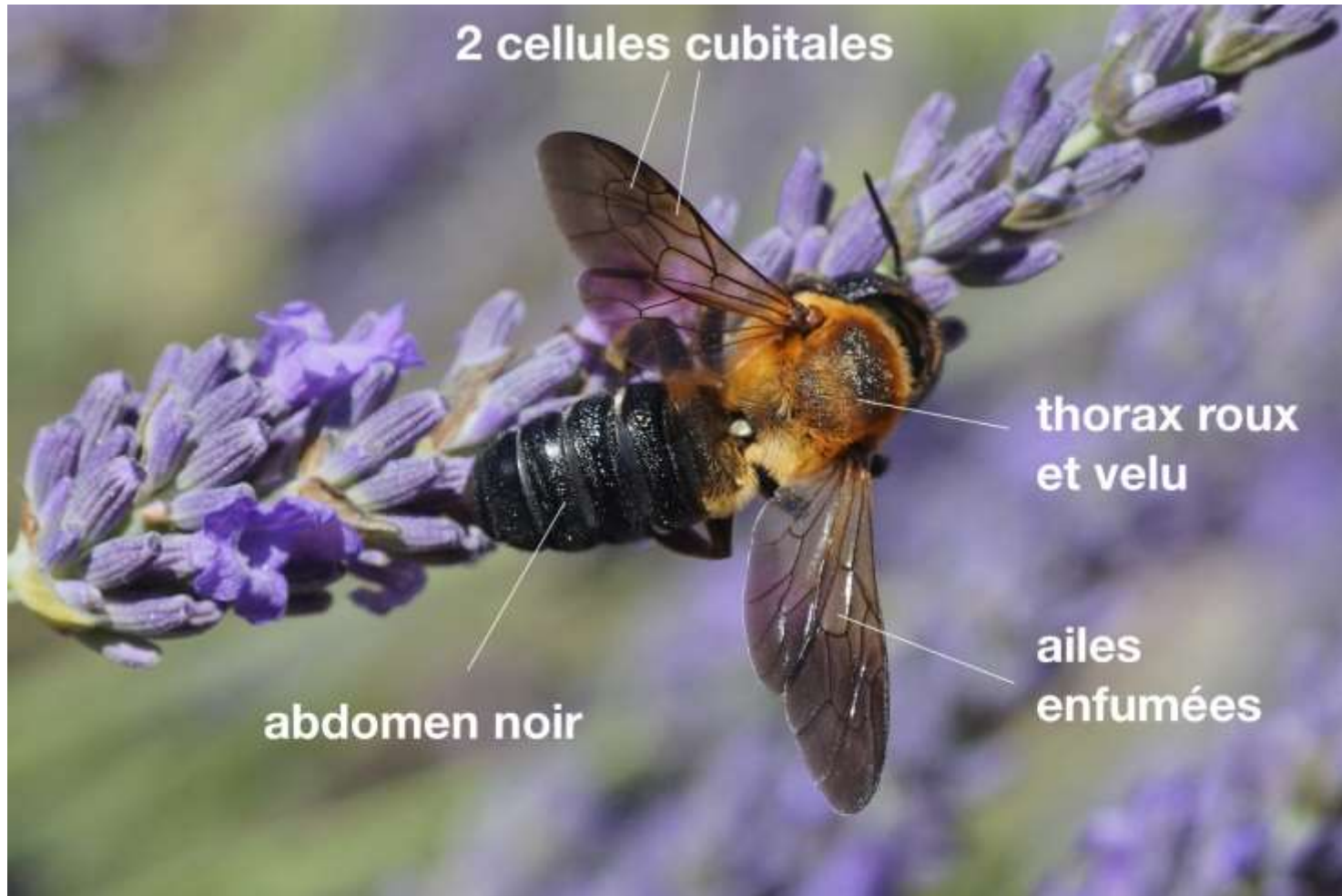
Les abeilles sauvages



The Giant Resin Bee

Megachile sculpturalis

(*Callomegachile*, Smith, 1853)



The Giant Resin Bee
Megachile sculpturalis
(*Callomegachile*, Smith, 1853)



The Giant Resin Bee

Megachile sculpturalis
(*Callomegachile*, Smith, 1853)



1994 - arrivée aux USA

JOURNAL OF THE KANSAS ENTOMOLOGICAL SOCIETY
70(2), 1997, pp. 140–142

First Records of *Megachile (Callomegachile) sculpturalis* Smith (Hymenoptera: Megachilidae) in the Continental United States

W. A. MANGUM¹ AND R. W. BROOKS²

First Records of *Megachile (Callomegachile) sculpturalis* Smith (Hymenoptera: Megachilidae) in the Continental United States

W. A. MANGUM¹ AND R. W. BROOKS²

Megachile sculpturalis Smith - A New Bee for Michigan (Hymenoptera: Megachilidae)

Mark F. O'Brien¹ and Julie Craves²

¹Insect Division, Museum of Zoology,
University of Michigan, Ann Arbor, MI
48109-1079; Email: mfobrien@umich.edu

²Environmental Interpretive Center,
University of Michigan-Dearborn,
Dearborn, MI 48128.

Michigan has seen an increasing number

coll. 1 female (Fig. 1
and Fig. 2).

MICHIGAN:
Wayne Co., Detroit
River International
Wildlife Refuge,
Humbug Marsh Unit,
N42.1149° x -
83.1867°; 8 August
2007, nectaring on
flowers of *Lythrum*
salicaria, Julie
Craves, coll. 1 male.
In addition, a female
bee was photographed
in Dearborn, MI on

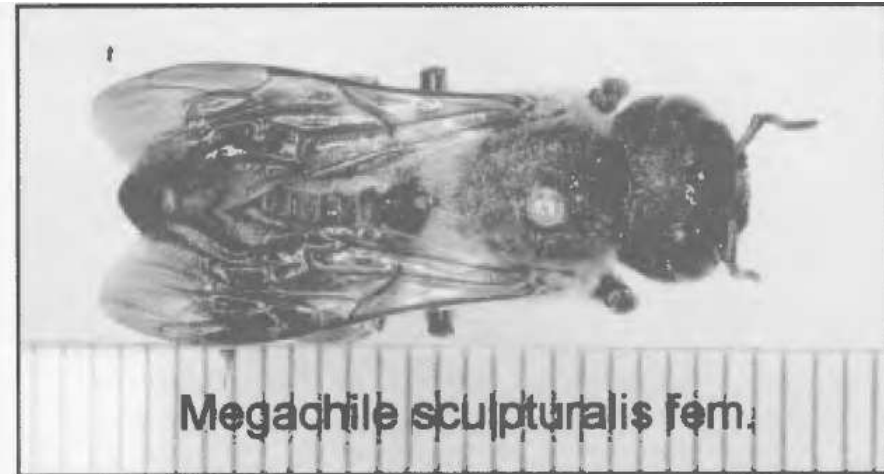


Figure 1. Dorsal view of *Megachile sculpturalis* female, 1 mm divisions on ruler. Specimen from UMBS in Cheboygan Co., MI.

ZooKeys 1: 67-71 (2008)
doi: 10.3897/zookeys.1.17
www.pensoftonline.net/zookeys

SHORT COMMUNICATION

A peer-reviewed open-access journal
ZooKeys
Launched to accelerate biodiversity research

The giant resin bee making its way west: First record in Kansas (Hymenoptera: Megachilidae)

Ismael A. Hinojosa-Díaz

48109-1079; Email: mfobrien@umich.edu
² Environmental Interpretive Center,
University of Michigan-Dearborn,
Dearborn, MI 48128.

Michigan has seen an increasing number

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1994 - arrivée aux USA

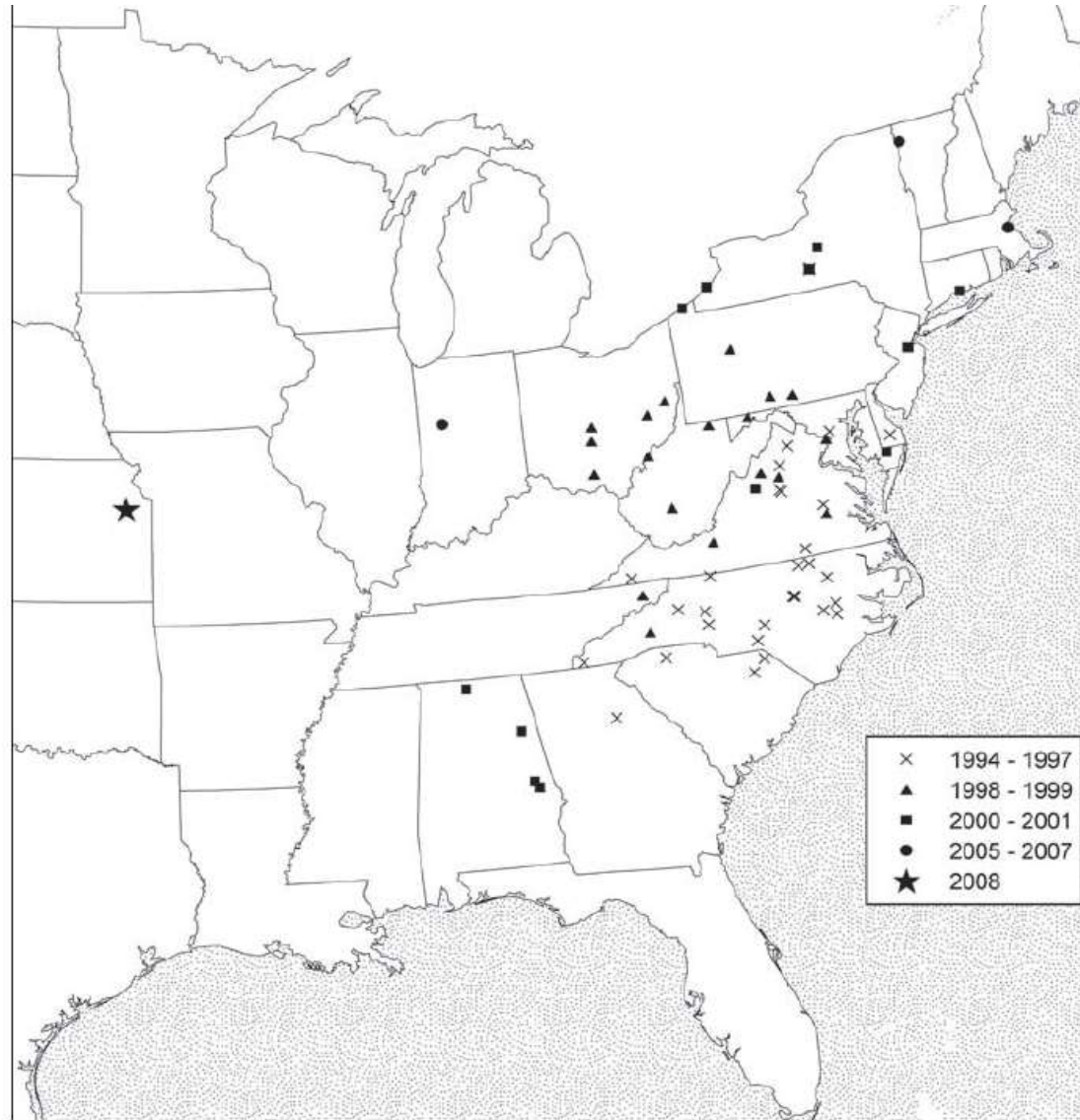


Fig. 3. Observed distribution for *Megachile sculpturalis* Smith in the United States; records of the species mapped by time series according to available data; the star symbol corresponds to the record from Lawrence, Kansas.

**THE GIANT RESIN BEE, *MEGACHILE SCULPTURALIS* SMITH, AND OTHER
NEWLY INTRODUCED AND NEWLY RECORDED NATIVE MEGACHILIDAE AND
ANDRENIDAE (APOIDEA) FROM ONTARIO.**

S.M. PAIERO and M. BUCK

Canadian Journal of Arthropod Identification No. 18 (November 2011)

SHEFFIELD ET AL.

Leafcutter and Mason Bees of the Genus *Megachile* Latreille (Hymenoptera: Megachilidae) in Canada and Alaska¹

Cory S. Sheffield*², Claudia Ratti*, Laurence Packer*, Terry Griswold**

* Department of Biology, York University 4700 Keele St., Toronto, ON M3J 1P3 corysheffield@yahoo.ca; cratti@yorku.ca; xeromelissa@mail.com. ** USDA-ARS Bee Laboratory, Utah State Univ., Natural Resources Biology Bldg. Logan, UT 84322 Terry.Griswold@ars.usda.gov.

Premières données sur la présence de l'abeille asiatique *Megachile (Callomegachile) sculpturalis* SMITH (Hymenoptera, Megachilidae) en Europe

Par Nicolas J VEREECKEN* et Eric BARBIER**

Abeilles «baladeuses»

La plupart des abeilles solitaires sont généralement peu mobiles une fois installées dans un environnement propice : on estime que la distance entre le site de nidification et les ressources florales exploitées pour le pollen indispensable au développement de la progéniture varie de quelques mètres à quelques centaines de mètres la plupart du temps (Kapyla 1978; Eickwort & Ginsberg 1980; Gathmann & Tscharnke 2002; Franzén et al. 2009; voir aussi Greenleaf et al. 2007). Les possibilités de dispersion entre populations distantes de plusieurs dizaines, voire plusieurs centaines de kilomètres semblent donc relativement limitées a

20/10/2017
prior.



Figure 1. Couple de *Megachile sculpturalis* observé sur une tige de

Conséquences pour la faune locale

JOURNAL OF THE KANSAS ENTOMOLOGICAL SOCIETY
85(4), 2012, pp. 387–388

SHORT COMMUNICATION

**Aggressive Eviction of the Eastern Carpenter Bee (*Xylocopa virginica* (Linnaeus))
from its Nest by the Giant Resin Bee (*Megachile sculpturalis* Smith)**

T'AI ROULSTON¹ AND ROSEMARY MALFI

Department of Environmental Sciences, University of Virginia, Charlottesville,
Virginia 22904-4123, USA

JOURNAL OF THE KANSAS ENTOMOLOGICAL SOCIETY
85(4), 2012, pp. 384–386

SHORT COMMUNICATION

**Occupation of Active *Xylocopa virginica* Nests by the Recently Invasive
Megachile sculpturalis in Upstate New York**

ROBERT G. LAPORT AND ROBERT L. MINCKLEY

Conséquences pour la faune locale



Conséquences pour la faune locale



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Conséquences pour la faune locale



Conséquences pour la faune locale



Conséquences pour la faune locale



20/10/2017

2015 – Lancement du monitoring

Description du groupe

Apoidea Gallica (à l'origine Apoidea Armoricana) est un groupe de discussion regroupant les personnes intéressées par les abeilles (Apoïdés), au départ du seul Massif armoricain, mais désormais de toute l'Europe francophone.

Photo: *Dasypoda hirtipes*, mâle;
Ondres - 40 (Landes)
17/07/2005 par David GENOUD



Informations du groupe

Membres : 383

A screenshot of a web browser displaying a forum page. The address bar shows the URL <http://www.insecte.org/forum/viewtopic.php?t=165459>. The search bar contains the text 'apoidea gallica'. Below the browser window is a decorative banner for 'Le Monde des insectes' forum. The banner features three circular icons: a butterfly, a wasp, and a group of people. The text 'Le Monde des insectes' is prominently displayed, with the subtitle 'Forum communautaire francophone des insectes et autres arthropodes' underneath.

2015 – Lancement du monitoring

Le Muséum SE CONNECTER

 Suivi photographique des insectes pollinisateurs

SPIPOLL

Accueil

LE SPIPOLL LA POLLINISATION GALERIES FORUM PARTICIPER RÉSULTATS ANIMATION DU RÉSEAU MON SPIPOLL

rechercher...

LE SPIPOLL

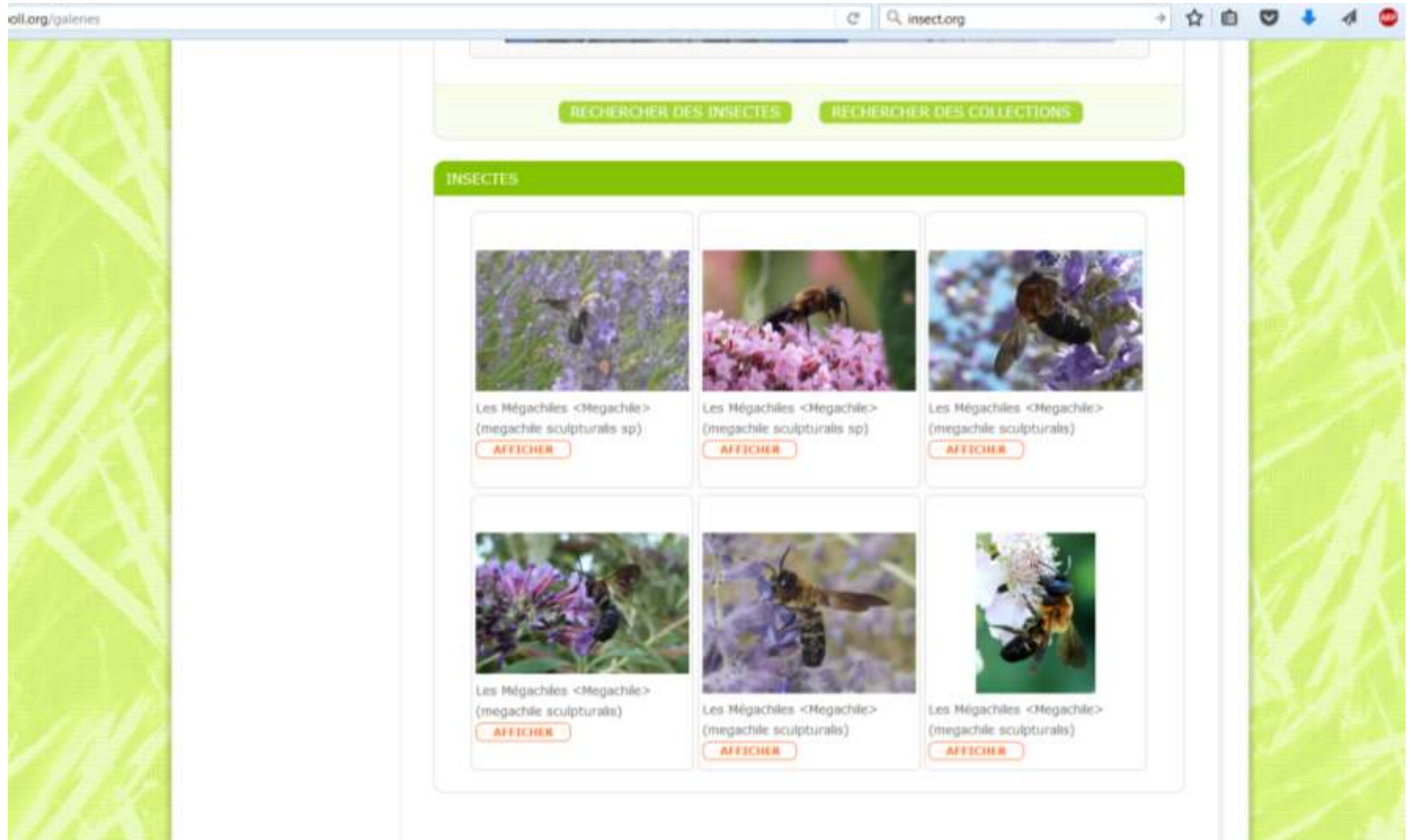
Projet de sciences participatives, le SPIPOLL a pour but d'obtenir des données quantitatives sur les insectes pollinisateurs et/ou floricoles en mesurant les variations de leur diversité et celles de la structure des réseaux de pollinisation, sur l'ensemble de la France métropolitaine.

[En savoir plus](#)

LES COLLECTIONS



2015 – Lancement du monitoring



The screenshot shows a web browser window with the URL `oil.org/galleries` and a search bar containing `insect.org`. The page features two main navigation buttons: **RECHERCHER DES INSECTES** and **RECHERCHER DES COLLECTIONS**. Below these is a green header labeled **INSECTES**. The main content area displays a grid of six insect images, each with a caption and an **AFFICHER** button. The captions for all images are: **Les Mégachiles <Megachile> (megachile sculpturalis sp)**. The images show various specimens of the Megachile genus, including bees on flowers and close-ups of their heads and wings.

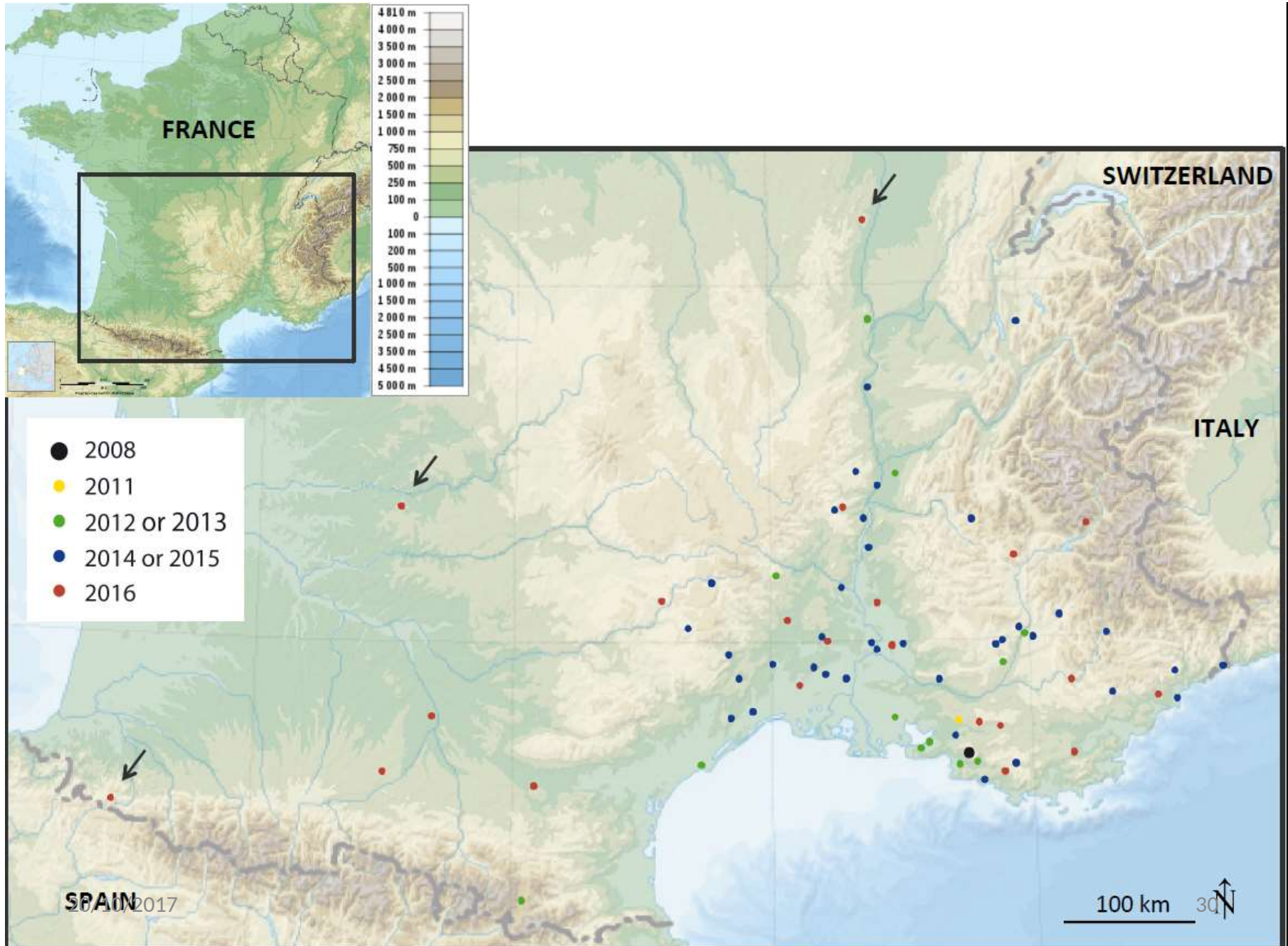
Réalisation d'une base de données

Year	Month	Day	Department (county)	City	X	Y	Sexe	Number of individuals	Nesting	Flower visitation	Visited flower species
2008	7	2	Bouches-du-Rhône	Allauch	na	na	both	several	na	yes	Lavandula sp.
2011	na	na	Bouches-du-Rhône	Aix-en-Provence	na	na	na	na	yes	no	na
2012	7	4	Hérault	Agde	na	na	na	na	no	yes	Scabiosa sp.
2012	na	na	Bouches-du-Rhône	Aix-en-Provence	na	na	na	na	yes	no	na
2012	8	1	Bouches-du-Rhône	Allauch	5° 28' 59.99" E (5.483333)	43° 19' 59.99" N (43.333333)	F	1	yes	no	na
2012	7	25	Alpes-de-Haute-Provence	Les Mées	na	na	na	na	yes	na	na
2012	7	15	Ardèche	Malbosc	na	na	na	na	no	yes	Lavandula sp.
2012	6	~25	Bouches-du-Rhône	Marignane	na	na	both	several	yes	yes	Lavandula sp.
2012	7	30	Bouches-du-Rhône	Marseille, 8e arr.	na	na	na	several	yes	no	na
2012	7	22	Var	Signes	na	na	na	na	no	yes	Lavandula sp.
2013	na	na	Bouches-du-Rhône	Aix-en-Provence	na	na	na	na	yes	no	na
2013	7	18	Bouches-du-Rhône	Aubagne	5.575	43.297	F	1	na	na	na
2013	8	10	Drôme	Chabeuil	5° 1' 0.001" E (5.016667)	44° 53' 59.99" N (44.9)	m	1	no	yes	Satureja acinos
2013	7	7	Bouches-du-Rhône	Châteauneuf-les-Martigues	na	na	F	na	no	yes	Lavandula sp.
2013	7	na	Bouches-du-Rhône	Istres	na	na	na	3	yes	na	na
2013	8	14	Alpes-de-Haute-Provence	Les Mées	5° 57' 13.25" E (5.9536808)	43° 59' 27.63" N (43.9910100)	F	1	?	yes	Sophora japonica

Résultats

- 117 enregistrements (ville * année)
- 83 localités
- Plus au Nord ⇨ Mâcon
- Plus à l'ouest ⇨ Alçay-Alçabéhéty-Sunharette

Résultats



The screenshot shows the Wiley Online Library interface for the journal *Ecology and Evolution*. At the top left, the Wiley Online Library logo is visible. On the top right, there is a 'Log in / Register' button. The breadcrumb trail reads: Home > Ecology > Ecology & Organismal Biology > Ecology and Evolution. The main title 'Ecology and Evolution' is prominently displayed in a large, teal font, with an 'Open Access' badge to its right. Below the title, there is a copyright notice: '© John Wiley & Sons Ltd'. A paragraph of text states: 'All articles accepted from 14 August 2012 are published under the terms of the Creative Commons Attribution License. All articles accepted before this date, were published under a Creative Commons Attribution Non-Commercial License.' To the right of this text, there is a purple 'Open Access' icon. Below the text, the Editors-in-Chief are listed: Allen Moore, University of Georgia, USA; Andrew Beckerman, University of Sheffield, UK; Jennifer Finn, Queensland University of Technology, Australia. The Impact Factor is listed as 2.44. On the left side, there are three main sections: 'JOURNAL TOOLS' with links for 'Get New Content Alerts', 'Get RSS feed', and 'Save to My Profile'; 'JOURNAL MENU' with links for 'Journal Home', 'FIND ISSUES' (Current Issue, All Issues), and 'FIND ARTICLES' (Early View, Most Accessed). On the right side, there is a 'SEARCH' box with a dropdown menu set to 'In this journal', a search input field, and buttons for 'Advanced >' and 'Saved Searches >'. The overall layout is clean and professional, typical of a scientific journal's website.

SHORT COMMUNICATION

Range expansion of the Asian native Giant Resin Bee *Megachile sculpturalis* (Hymenoptera, Apoidea, Megachilidae) in France

Violette Le Féon^{1*}, Matthieu Aubert¹, David Genoud¹, Valérie Andrieu-Ponel³, Paul Westrich², Benoît Geslin^{1,3}

2015 – Monitoring suite



2015 – Monitoring suite

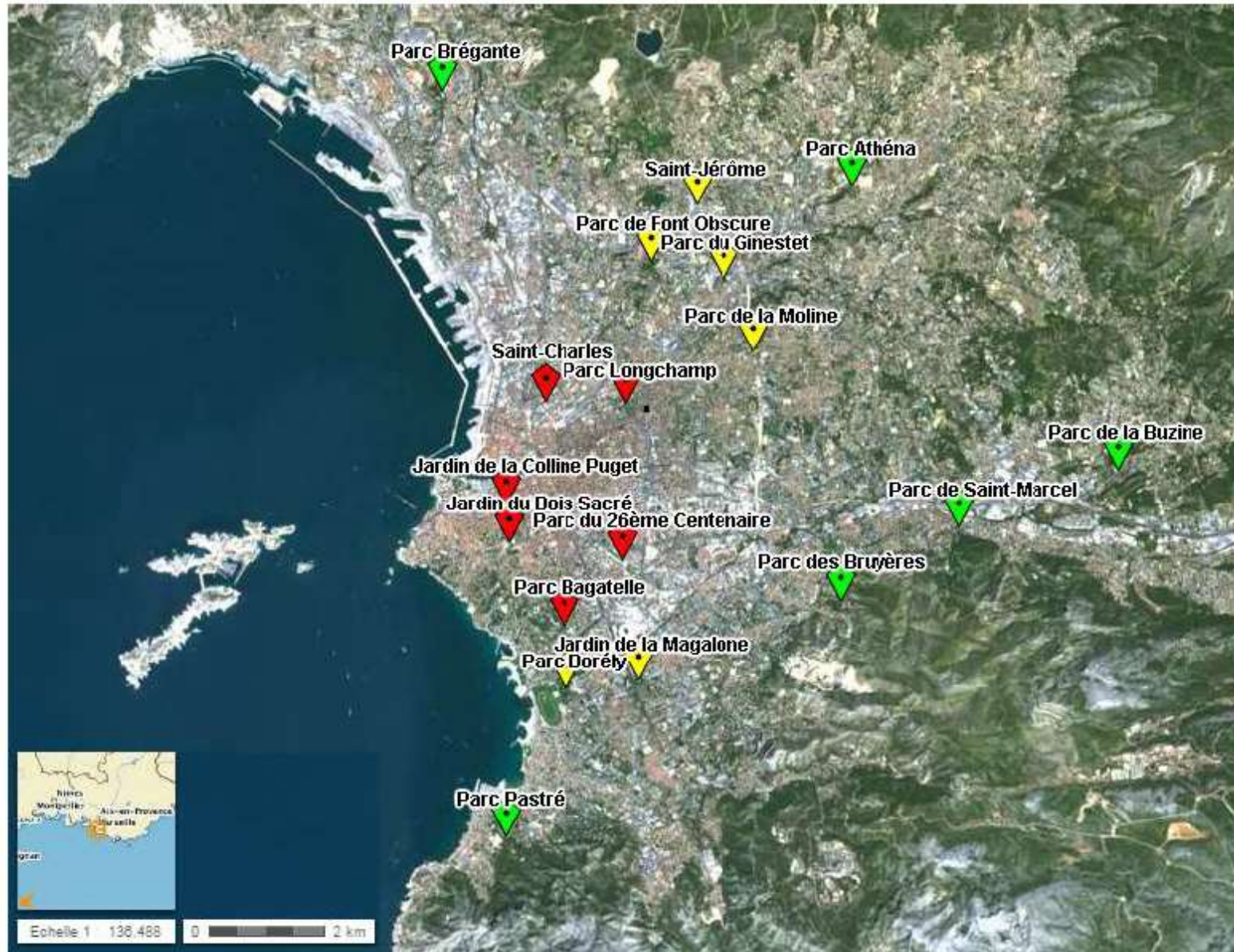


20/10/2017

2015 – Monitoring suite



2015 – Monitoring suite



2015 – Monitoring suite



En plus de l'ODS Provence, les élèves participeront à une autre expérience scientifique : le suivi des abeilles !

Benoît Geslin, chercheur de l'IMBE spécialiste des insectes, a remis aux collèges participant à l'ODS des hôtels à insectes.

Les classes de 6ème pourront y observer la nidification de certains insectes, en particulier des abeilles sauvages. En plus d'être un outil pédagogique, les hôtels à insectes serviront au suivi de l'abeille du Japon potentiellement invasive, *Megachile sculpturalis*, et des espèces natives du genre *Xylocopa*.



2015 – Monitoring suite



20/10/2017

2015 – Monitoring suite



20/10/2017

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2016 – Monitoring suite



20/10/2017

2016 – Monitoring suite



2016 – Monitoring suite

- ~ 105 individus
- ~ 103 *Megachile sculpturalis*



2016 - Monitoring suite



2017 – Monitoring suite

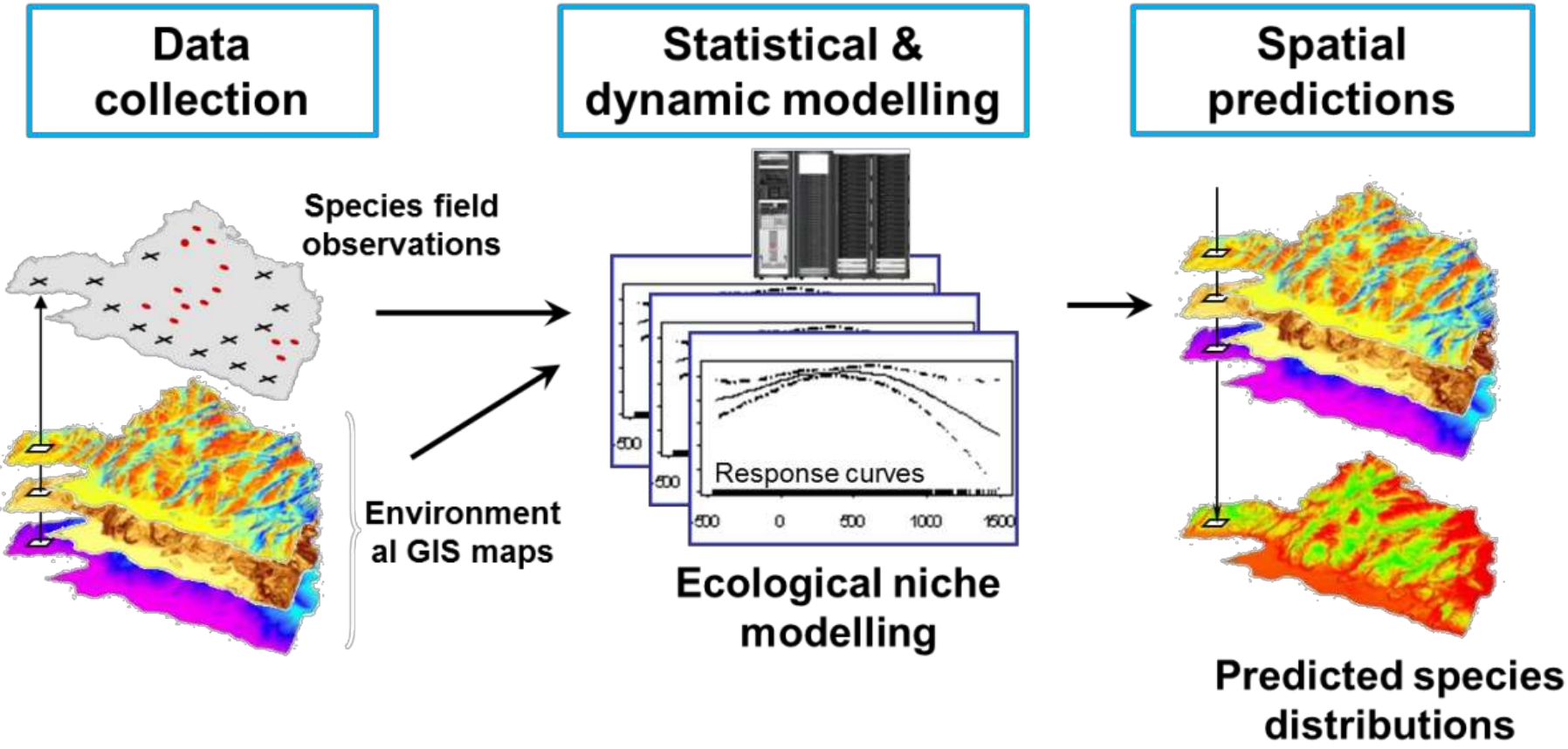


20/10/2017

2017 – Monitoring suite

- ouverture de toutes les buches et bambous
- caractérisation de tout les pollens
- analyse des restes d'insectes
- amélioration de la cartographie (SDM etc...)

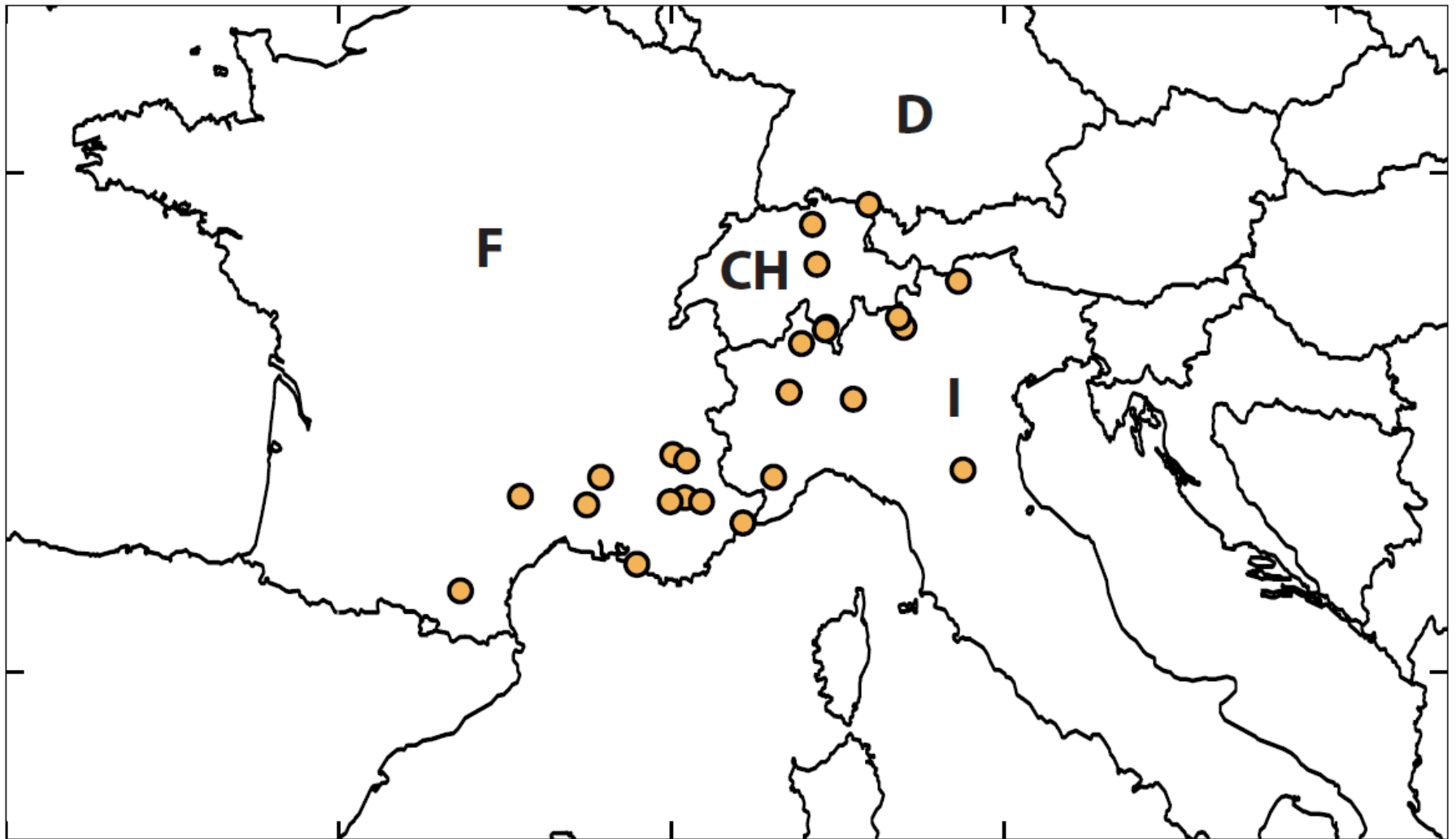
2017 - Monitoring suite



2017 – Monitoring suite

- ouverture de toutes les buches et bambous
- caractérisation de tout les pollens
- analyse des restes d'insectes
- amélioration de la cartographie (SDM etc...)
- car son aire de répartition continue à s'étendre

2017 - Monitoring suite



Merci de votre attention

