

**sineu**

**graff**

STREET FURNITURE



**Refuge Bench**



INVENTED AND PRODUCED IN FRANCE



STREET FURNITURE

## From biodiversity...

**A meeting between a designer and a naturalist can give rise to many ideas, even in terms of street furniture. Luckily an industrial company in the sector is there to bring such ideas to life!**

The idea for the Refuge Bench came into being by querying the place of nature in cities. From research to questioning, from confrontations to tests, it was in the course of the exchanges between different professionals that what was initially only a project assumed concrete shape.

Promoting biodiversity, and particularly biodiversity in direct contact with human beings, is a challenge that only collective intelligence can take up. The result of a close collaboration, the Refuge Bench came into being thanks to the desire to contribute to global change. A little helping hand for biodiversity and a genuine tool to bring together all nature and wildlife publics, a valuable contribution.

## ... to the park bench!

**Promoting biodiversity for a naturalist is also to encourage the return of insects to cities in urban spaces. Informing and involving populations in this approach, associating with it furniture for rest and ornament, such was the guiding principle of this development project.**

The meeting between a naturalist, an eco-logical designer and an industrial company gave birth to the Refuge Bench and to its implementation to create natural living conditions for insects. This experience still had to be shared with populations, through explanations of this phenomenon and their participation via their observations in this return of nature to cities.

Consequently, the Refuge Bench concept stands for the provision in public spaces of seating furniture incorporating boxes containing natural ingredients allowing insect life, as well as signs explaining this action promoting biodiversity and referring readers to a site giving more details and allowing them to participate actively by sharing their own field observations.

The Refuge Bench is thus an urban structure combining participatory science, encouragement of biodiversity, and an environmental observation and mediation tool.



**Julien HOFFMANN**  
Naturalist - DEFI-Écologique



**Philippe RIEHLING**  
Designer - DEFI-Écologique



**Vincent SCHALLER**  
CHAIRMAN, SINEU GRAFF



« The French Labbé law set the table, let the Refuge Bench now offer them shelter. »

## At the beginning...

**Application of the French Labbé law and thus the ban on use of phytosanitary products since January 1<sup>st</sup> 2017, has direct consequences on urban environments with the return of “spontaneous” vegetation.**

This return of flora actually implies a return of fauna and, in this case, of small fauna, namely insects who feed on plants, pollen and nectar.

Logically, the return of this small fauna comes hand in hand with the return of its predators, namely all kinds of birds.

We've come full circle? Not quite. For this small fauna to thrive, while it certainly needs food, it also requires places to spend the winter, breed, shelter.

The French Labbé law set the table, let the Refuge Bench now offer them shelter!

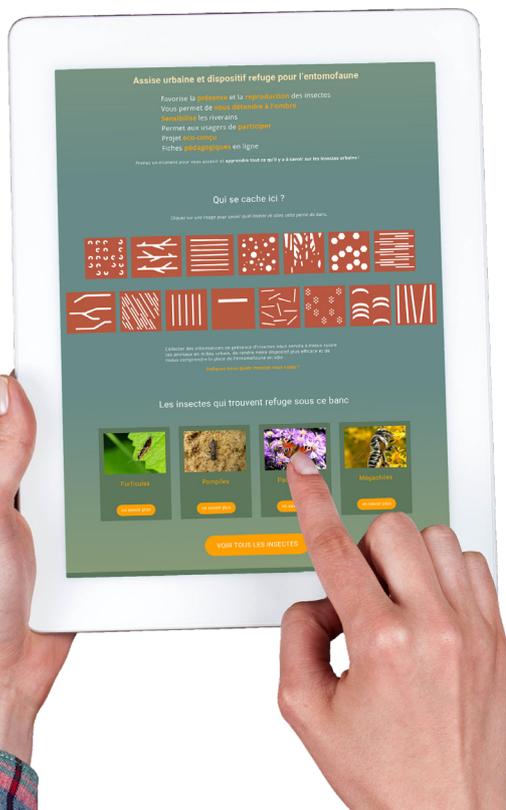




« Bring people closer to nature and let them participate.»

## Goals

**Insects account for 70% of known biodiversity. There are estimated to be between 880,000 and 1 million species.**



### ENCOURAGE THE RETURN OF NATURE TO OUR CITIES

The aim is to have a direct, local and visible impact on biodiversity. Thanks to the substrates placed in the boxes, numerous insect species will settle there, thrive and breed, including Chrysopidae, Ladybirds and Anthocoridae, all food for the small insectivorous birds that thus regain their place in the immediate environment.

### INCREASE CITIZEN AWARENESS

The insect world, still unfamiliar to the general public and sometimes feared, is attracting increasing interest, as is attested by the many participatory science programmes proposed in recent years. Such initiatives demystify insects, place them in their natural environment, and justify their essential role in biodiversity. The Refuge Bench makes all this public knowledge.

### PROPOSE A PARTICIPATORY EDUCATIONAL TOOL

A QR code placed on the Refuge Bench allows access to the site explaining the device and its goals and providing information on the insects living there and their role in biodiversity. Web users can participate in this action by offering up their observations, which will provide a valuable source of information and data to be shared.

**The Refuge Bench is thus an urban seat combining participatory science, encouragement of biodiversity and an environmental observation and mediation tool.**

# Design

« Eco-design  
on the horizon. »

## THE DEVICE

**Attentive to the origin of materials and to eco-design principles, we propose a sustainable device, made of solid wood and steel, both for quality of use and for increased durability, rendering it urban-proof.**

Steel is treated using the Powder Blast technique, which uses no environmentally harmful products and contains no acids or heavy metals. This technique guarantees the mechanical strength and durability of the Refuge Bench. The Powder Blast technique allows fair use of finishing material quantities and ensures recovery of powders for re-use.

The wood chips are stored in silos and heat the site through energy recovery. Robinia wood is naturally class 4, and exhibits good outdoor resistance requiring no treatment or maintenance.

Finishings also play an important role. The choice of colour is noteworthy with the contrast between black (RAL 9004, mat) and coral red (RAL 3016, sandy texture), which has a “beacon” role for some host species of our device.



« All materials to furnish  
the device efficiently  
are available for sale. »

## THE MATERIALS

**Insects are very demanding small creatures that are attracted by specific environments, whether a particular plant or a unique biotope. The same is true of materials that will attract a specific type of insect.**

The 15 shelters present in this device are thus designed with this in mind. Each of them targets a specific species both through the choice of material placed there and through the size, exact to the millimetre, of the frontage openings. The materials proposed to equip the Refuge Bench were all selected in keeping with eco-design principles.

The materials proposed to equip the Refuge Bench are recovered, collected and manufactured in a short-circuit logic, calling on local craftspeople, an institute for the re-insertion of young school drop-outs, and an ESAT (Professional/social reinsertion centres for the disabled).





«Its south-facing orientation will guarantee the sunshine that insects need.»

## Layout

**The very layout of the Refuge Bench is vital for the success of its colonisation by insects.**

The proximity of vegetation, preferably diversified, will guarantee the presence of the insects targeted by the device, but also and in particular the installation's coherence.

The materials required to equip the Refuge Bench were all selected in keeping with eco-design principles.

### Steel structure:

RAL 9004 (safety black, mat)

RAL 3016 (coral red, sandy texture)

**Wood:** Robinia

### Fastening:

4 fastening points / module

Optional ground anchoring without concrete.



## Configurations



L-shaped configuration - rear view



L-shaped configuration - front view



U-shaped configuration - front view



U-shaped configuration - rear view

**DEFI-Écologique, an environmental ecosystem design consultancy firm, has combined here the natural skills of Julien Hoffmann with those of the eco-designer Philippe Riehling to come up with the Refuge Bench.**

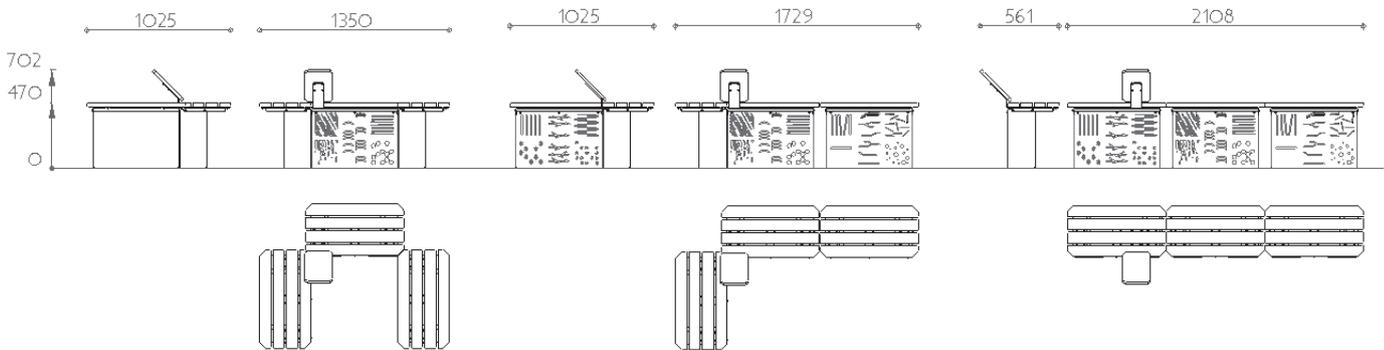
Hosted as a Business and Employment Cooperative participating in the very idea of sustainable development at the heart of the Social and Solidarity Economy, the Entrepreneurs' Collective DEFI-Écologique promotes the idea that wildlife protection also calls for economic recognition if it is to influence public policies.



**Sineu Graff designs and manufactures all its street furniture in its Kogenheim factory in Alsace. It transforms wood and metal to locally manufacture its street furniture, painted and assembled in its workshops and sold the world over.**

Our expertise as designers combined with our in-house mastery of finishing treatments and production processes on all materials, our cutting-edge tools (laser cutting, welding robotics, paint line, surface coating line, etc.) allow us to offer the best products and solutions. The incorporation of design-production combined with our strong corporate culture based on attention to customers' needs, keeping our commitments, the permanent quest for excellence, and our continuous improvement approach guarantee extremely high quality furniture in optimum economic conditions.

#### Dimensions in mm



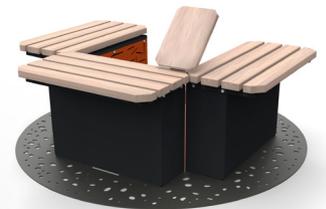
Straight configuration - rear view



Straight configuration - front view



U-shaped configuration with tree grid option



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