

NEIGHBORHOOD SCALED BIODIVERCITIES

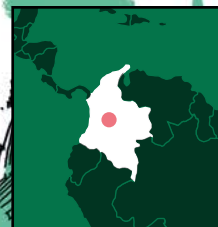
María Stella Sáchica
Juan Carlos Caicedo
Grupo Ecomunitario,
Colombia.

An initiative by a group of Gran Chicó neighbors to learn about its biodiversity resulted in recognition of the area as a prioritized ecological corridor in Bogotá.

COMMITMENTS

2 5 6 8

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BOGOTÁ,
COLOMBIA

Pop. 7,181,000

1,775 km²

2,640 m.a.s.l.

KEY CONCEPTS

CITIZEN SCIENCE

ECOLOGICAL CONNECTIVITY

PHENOLOGY CALENDAR

FOOD GUILDS

In the Chapinero District, a group of citizens curiosity to learn about flora and fauna in their new neighborhood gave rise to a landscape and multifunctional vision of the sector's green areas. The Gran Chicó ecological corridor has gained valuable institutional and political recognition thanks to this citizen science exercise.

In 2014, neighbors of the Gran Chicó, began to explore the sector's green areas and record flora and fauna, consolidat-

ing observations on the **iNaturalist** and **eBird** platforms. In the process, they discovered that these spaces faced challenges in terms of management, as the high biodiversity, previously unknown, that the area harbored was not being recognized. This information gap inspired the creation of Grupo Ecomunitario in 2015, a non-profit organization that promotes the development of ecological knowledge to foster better management practices for urban green spaces that increase biodiversity, climate resilience, and human well-being. Several concerns arose as the flora

and fauna species list continued to grow in the neighborhood. For example, how to contextualize the biodiversity found in the Gran Chicó sector and compare it with other areas of Bogotá? The most detailed inventories of flora and fauna at the time were restricted mainly to 15 district ecological wetland parks and the Thomas Van der Hammen and Bosque Oriental de Bogotá reserves, all very different from the urbanized mosaic of parks, street medeans, and gardens of Gran Chicó. However, although the number of species began to equal or in many cases exceed these ar-

eaes, the District administrative office did not incorporate the biodiversity present in Gran Chicó. Thus, the project sought to approach decision-makers to bring the importance of biodiversity management to the table. Thanks to Grupo Ecomunitario's efforts, the District is making progress in managing urban green areas that have not been traditionally considered for their ecological contributions. Today, the Gran Chicó is a prioritized corridor for **ecological connectivity** in the District Development Plan 2020-2024 and the new Land Use Plan 2022-2035.

KEY ACTORS IN TUNE WITH THE ECOLOGICAL NETWORK

First, it was necessary to stress the importance of understanding that green areas are habitats, and fauna species are excellent bioindicators for measuring ecological quality. In this sense, it is essential to consider that, while some species are common and generalists, others are rare and specialists in their requirements, both in terms of food, shelter and nesting sites. To illustrate, we can draw a parallel between the ecological enrichment of habitat and a party. For the party, it is crucial to know which friends are carnivores, vegetarians, or vegans, which ones drink liquor or not, etc. A good party has a variety of food and drinks with this in mind. For wildlife, these resources include water, nectar, pollen, fruits, seeds, and host plants. Similarly, the concept of **food guilds** applies to shelter and breeding site guilds for leaf litter, tree cavities and decaying wood among others.

On the other hand, it was essential for the project to know the different types of existing green areas, what rules regulated them, who administered them and how they articulated with each other. In this case, the project sought to go beyond a traditional figure (for example, a ravine, a wetland or stream) and consolidate a polygon of 621 hectares, so the existence of different typologies implied establishing a compatibility between environmental management, ecological functionality and inter-institutional articulation.

In the context of Bogotá, the management of public green areas has mostly been limited to certain environmental services (such as shade and air quality), along with aspects of security, aesthetics, and recreation, without considering ecological functionality. In addition, there is a substantial percentage of public green spaces without clear regulations, such as road corridors, green sidewalk strips, as well as front gardens, and other private areas.

A NEW VISION FOR THE GRAN CHICÓ

Given the administrative complexity and the need to move from data collection to decision-making influence, a strategy for coordination and discussion between key public and private actors was proposed. As a result, in 2015, the Gran Chicó Working Group was created as an inter-institutional instance for effective participation focused on providing all public and private actors with a more comprehensive vision that enhances biodiversity and climate resilience. Through regular meetings, we seek to direct investments toward more multifunctional projects compatible with **nature-based solutions** that contribute to the corridor's objectives.

In the working group, Grupo Ecomunitario has proposed and implemented pilot projects with several

GRAN CHICÓ'S BIODIVERSITY



GREEN PUBLIC SPACE TYPOLOGIES OF THE GRAN CHICÓ

Gran Chicó Polygon highlighting ecological connectivity at the neighborhood scale. Green spaces with no designated color correspond to private green spaces such as the Seminario Mayor and Museo El Chicó. Other typologies not visible due to the map's scale include gardens, ornamental water fountains, and green building facades.

- Riparian Ecological Corridor (R.E.C.)
- Parks greater than 1 Hectare
- Parks less than 1 Hectare
- Green sidewalk strip
- Roads with green median strip

GRAN CHICÓ'S AREA IS OF **261 ha**

district entities to provide more diverse and healthier habitats for fauna. Some of the projects include: new tree species that complement and balance the wildlife food supply, planting gardens for pollinators, integrated pest management, and safe management of dead trees and decaying wood. For example, Grupo Ecomunitario has managed to transform institutional practices regarding integrated pest management, reducing the standardized use of pesticides in public green areas

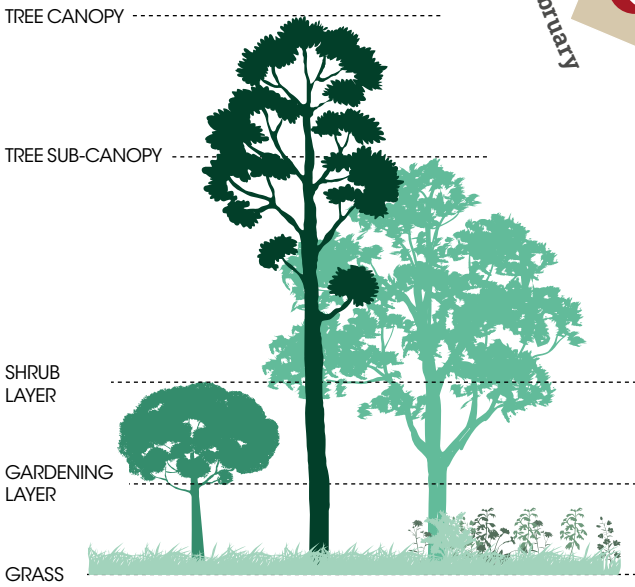


Source: IDECA - Infraestructura de datos espaciales de Bogotá



PHENOLOGY CALENDAR

- Open flowers
- Umbel flowers
- Tubular flowers
- Fruits/berries
- Raceme flowers
- Seeds



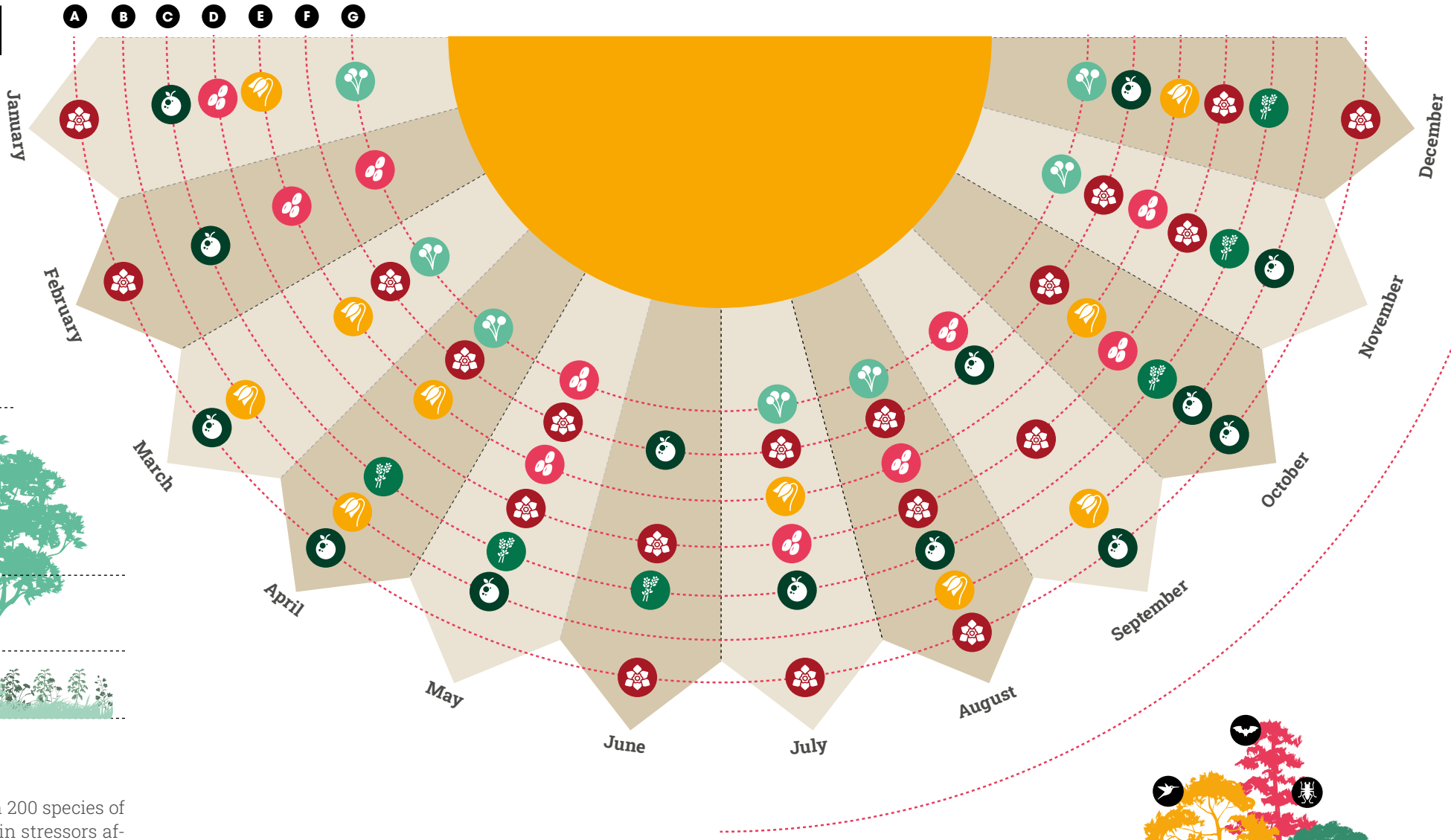
(in Gran Chicó alone, there are more than 200 species of insects, and pesticides are one of the main stressors affecting them). At the same time, there has been a robust outreach effort on the area's importance, challenges, and opportunities through guided hikes, lectures, content on social media, didactic maps and illustrations of the Gran Chicó¹, technical and legal reports, and fauna and flora identification guides. To this extent, we seek to build free and open-access tools for environmental education that can be replicated or scaled in other urban areas (see www.grupoecomunitario.org).

Several years' work, together with perseverance through different district administrations, allowed us to transcend from the management of green areas as delimited and independently administered spaces to the consolidation of a polygon that, although highly urbanized, can be planned from a multifunctional perspective. As a result, today, the Gran Chicó is a priority corridor for Bogotá's ecological connectivity.

KEY LESSONS

➔ It is possible to articulate common objectives through effective participation by relying on a technically and legally supported ecological and normative baseline. Thus, it is feasible to reach a shared vision and achieve the objectives of the District's development plans from different competencies and interests.

➔ Adequate land use planning guarantees the recognition of protected areas and other typologies, avoids habitat homogenization, and guarantees multi-species and multi-strata landscape designs, increasing climatic resilience and the habitat quality for wildlife.



- A** Tree species 1
- B** Tree species 2
- C** Shrub
- D** Garden plant 1
- E** Garden plant 2
- F** Garden plant 3
- G** Host Plant

Conceptual illustrations to design multi-strata and multi-species urban landscapes that incorporate a diverse wildlife food supply during an annual cycle.

PHENOLOGICAL CYCLE

- Leaf herbivory
- Flowering
- Fruiting
- Seeding
- Host plant and other herbivores
- Pollinators and other flower visitors
- Fruit feeding and dispersal
- Seed feeding and dispersal

