

Survive or Sur-Thrive: Is the Prospect Park Diet for You?

Macaulay ScienceForward STEAM Project 2023

Abstract

The age-old practice of foraging is defined by gathering wild plants, fruits, and fungi for sustenance and medicinal purposes (Mihail, 2023). The history of humans' adaptability to the natural environment and survival circumstances can be credited to edible plants and animals. Since early hunter-gatherers, plants have remained valuable to human societies (Duguma, 2020). Here, we focus on foraging flora and fauna as food sources in Brooklyn's Prospect Park. From the wild "Oyster Mushroom" which we see packaged in plastic and sold at our local Asian supermarkets to the "Common Dandelion" we see growing all around us in the summer months, we dive deeper into our tasty environmental surroundings and analyze its potential to supplement a standard human diet.


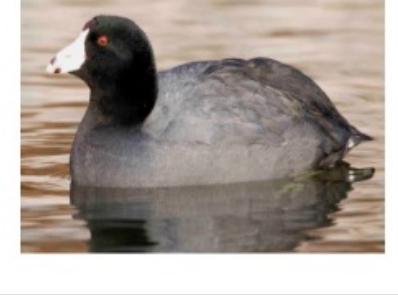
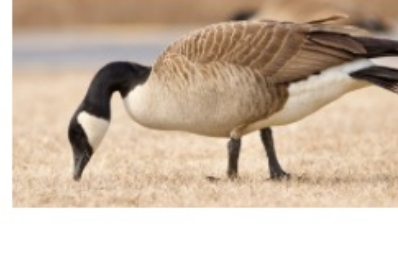
Importance




In our urban context, it is easy to overlook where our food is sourced and how it is produced to be readily available for our modern lifestyles. As a result, we have become consumers of an industrialized food system, disconnected with the natural world and the practices that work to support our livelihood. Thus, foraging underscores our relationship with nature and the essential role of sustainable food systems.

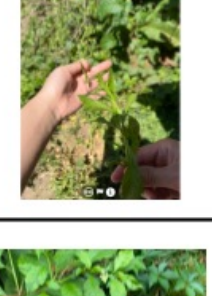


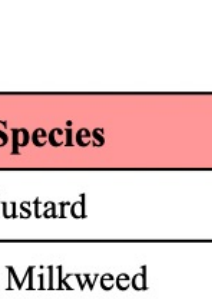
Methodology

In conducting our analysis on the edible life in Prospect Park, our methodology serves to investigate the nutritional viability for sustenance in an urban landscape. Our efforts begin with collecting the conservation statuses and caloric values of various edible species within the park. We then developed a detailed graph illustrating the annual seasonality of these resources based on the number of iNaturalist observations. Ultimately, the approach centers on identifying the most optimal months for sustaining a balanced diet of about 2000 calories. By consolidating information on each edible species' conservation status, caloric content, and seasonality, our data outlines the nutritional value of Prospect Park flora and fauna for consumption.

Edible Flora and Fauna Data

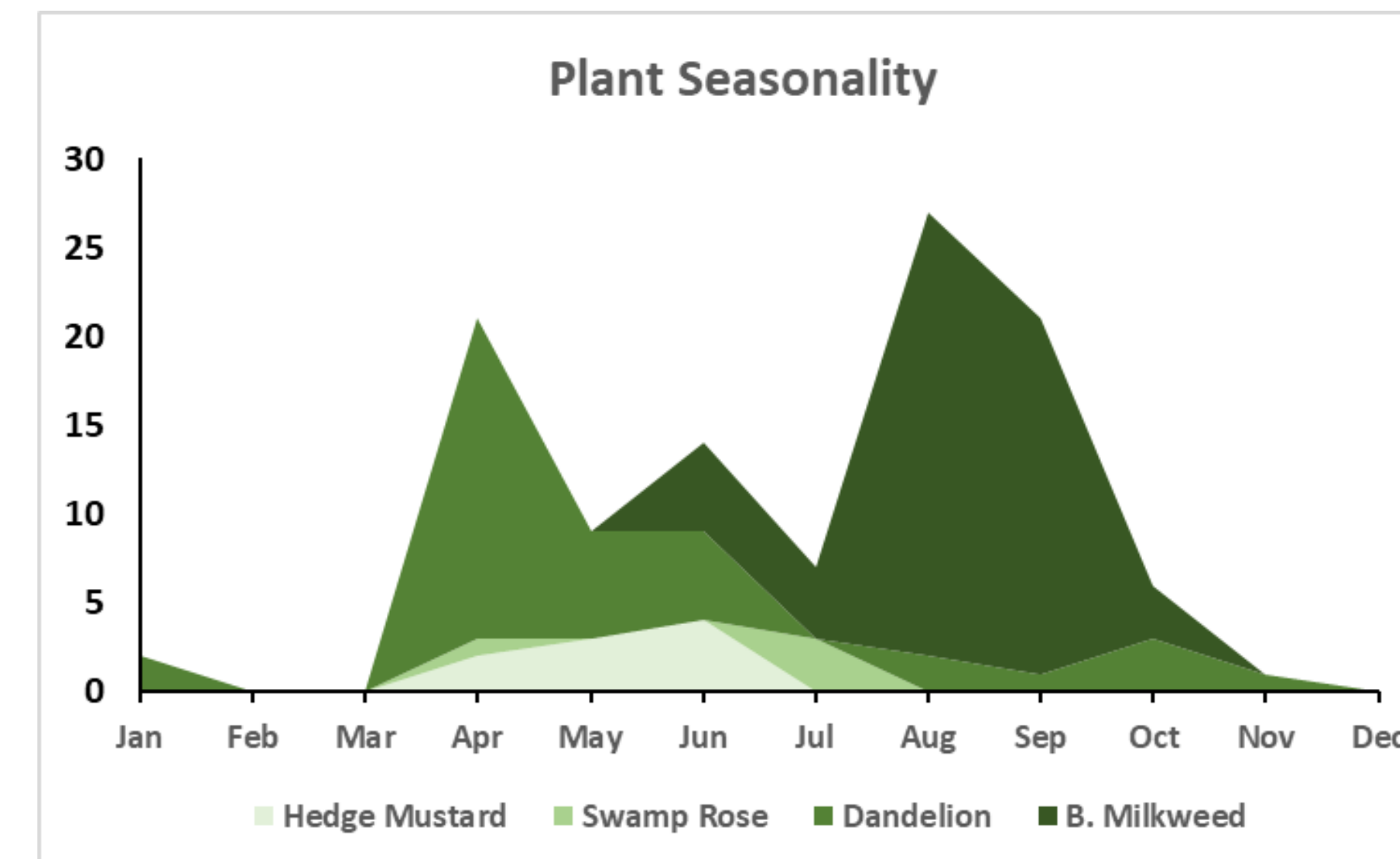
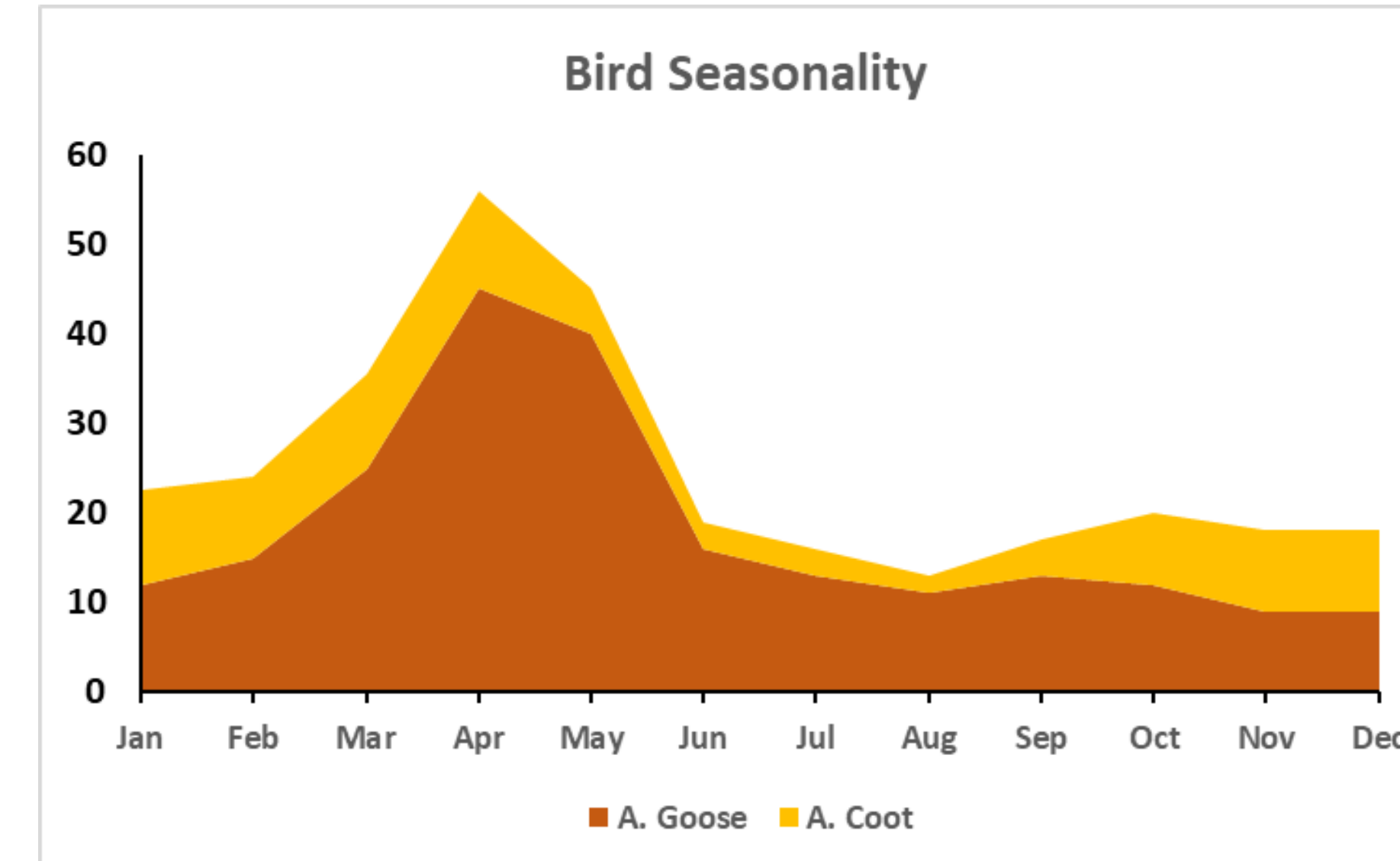
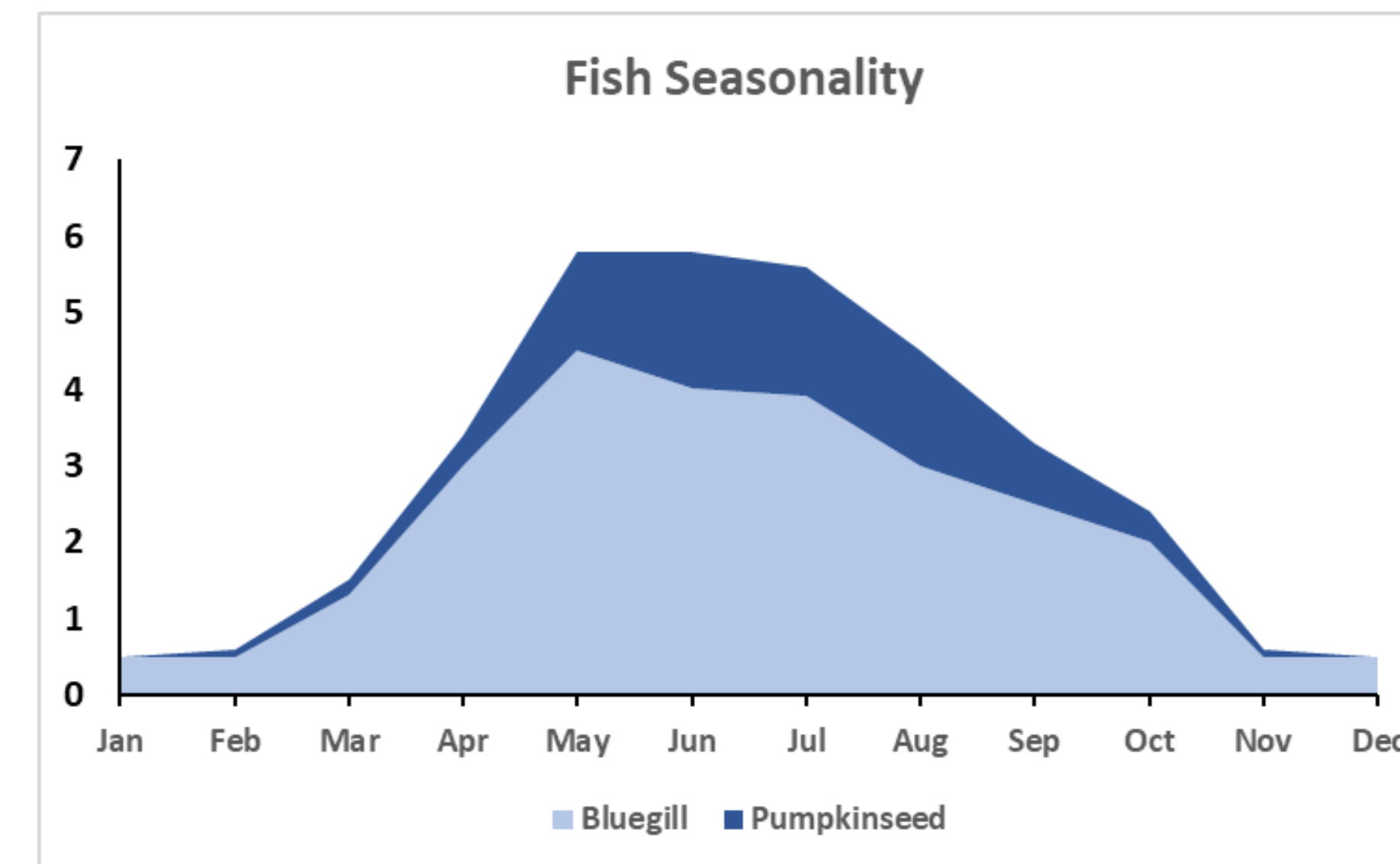
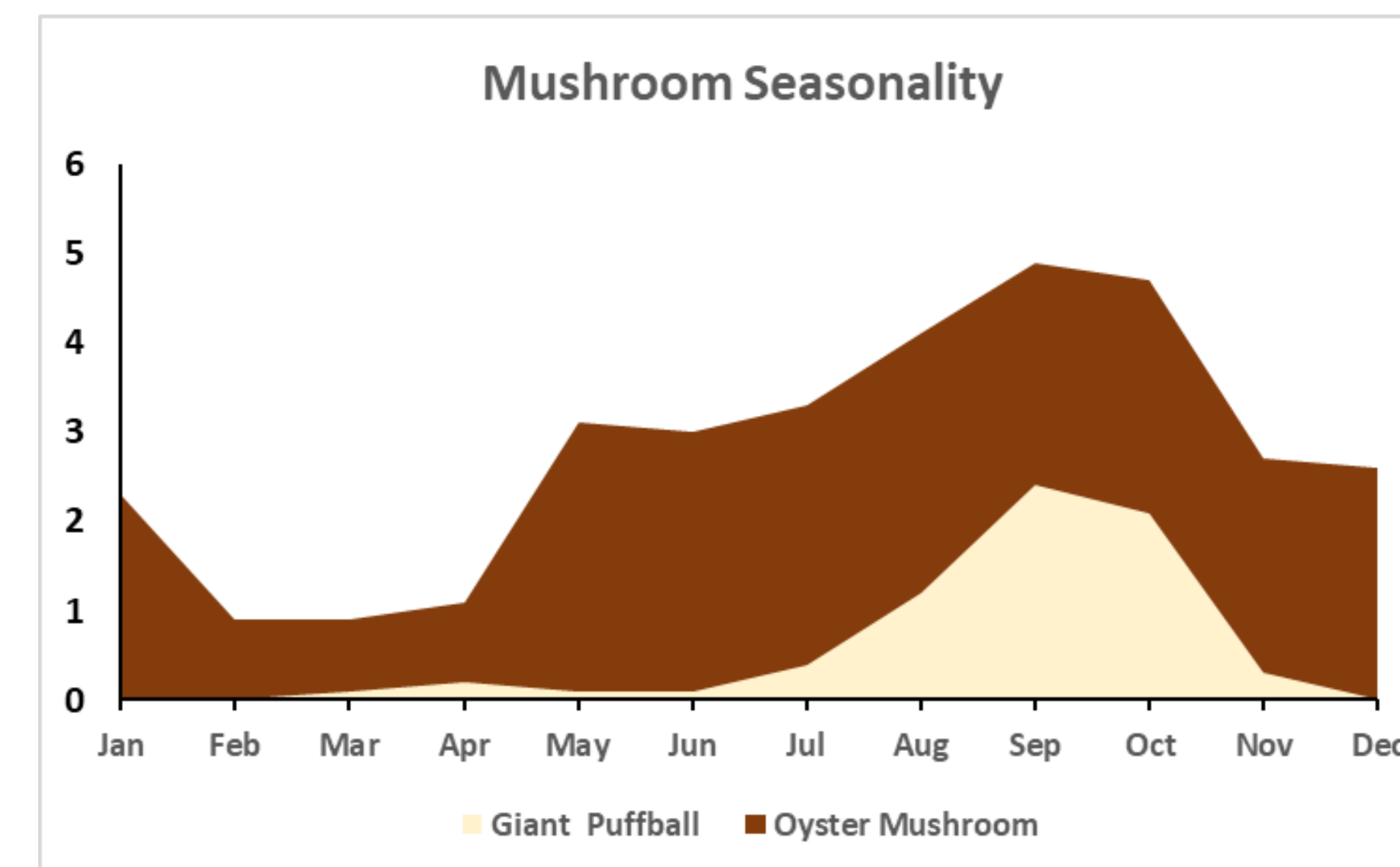
Edible Fungi/Fauna Located in Prospect Park	Caloric Value
 <p>Pumpkinseed → Pumpkinseeds are well-known for being a delicious fish to eat.</p>	There are 43 calories in a 1 fillet (48.000g) serving size.
 <p>American Coot → The dark meat of these overlooked game birds embodies a hearty wild flavor well-suited to a variety of unique, and very tasty recipes.</p>	~450 calories per one American Coot (This animal is likened to a normal ducks, which as this same caloric value).
 <p>Canadian Goose → In fact, they are a popular game bird to hunt and eat. The meat is dark and rich, similar to duck or venison. It can be roasted, grilled or even made into jerky</p>	There are 113 calories in a 3 oz (85.000g) serving size.

Edible Fungi/Fauna Located in Prospect Park	Caloric Value
 <p>Oyster Mushrooms → Considered a choice edible, wild oyster mushrooms have a much better flavor than the cultivated oyster mushrooms found at grocery stores</p>	One cup of raw, sliced oyster mushrooms (86g) provides 28 calories
 <p>Giant Puffball → Giant puffball mushrooms are edible.</p>	28 Calories
 <p>Bluegill → Bluegill are one the tastiest fish that roam fresh water. They taste amazing and are right there with walleye and pike</p>	3-ounce portion totaling 97 calories

Edible Plants Located in Prospect Park	Caloric Value
 <p>Hedge Mustard → Nowadays, its edible leaves and seeds are used in salads in Europe</p>	25 Calories for 1.5 Cups
 <p>Butterfly Milkweed → The young stems, flower buds, and roots of butterfly milkweed were boiled and eaten as a vegetable</p>	Edible flowers, generally, have 40 calories per 100 g
 <p>Swamp Rose → The flowers can be eaten cooked or raw</p>	Edible flowers, generally, have 40 calories per 100 g
 <p>Common Dandelion → Every part of the dandelion is edible: the flower, roots, stems, and leaves"</p>	25 calories a cup of raw dandelion greens

Species	Species Status	Total Observations
Hedge Mustard	Not in National Sensitive Species List	13
Butterfly Milkweed	Conservation Status Globally: Secure	58
Swamp Rose	Conservation Status Globally: least concern (LC)	4
Common Dandelion	Not in National Sensitive Species List	41
Oyster Mushrooms	No conservation status for this taxon	86
Giant Puffball	No conservation status for this taxon	55
Bluegill	Conservation Status Globally: least concern (LC)	33
Pumpkinseed	Conservation Status Globally: least concern (LC)	18
American Coot	Conservation Status New York: Vulnerable	347
Canadian Goose	Conservation Status Globally: least concern (LC)	342

Seasonality of Different Flora & Fauna



Analysis and Conclusion

As seen from the various seasonalities of plants, birds, fish and fungi in Prospect Park, the diet of our subject must adapt to the different seasonal shifts in scarcity and abundance of each food type. Plant scarcity grows in the winter months while mushrooms and birds stay relatively available as a reliable source of calories for colder months. In the summer months where water and the temperature is warmer, fish and plants thrive as exhibited by their respective peak populations.

The months which are ideal for a balanced diet and survival would be from April to August. This 5-month timespan allows for plants, birds, fungi, and fish all to be consumed without much effort, as well as providing a temperate climate for our subject to live in.

We are able to ascertain that the diet of a Prospect Park forager would have to change based on seasonal shifts, though it is still possible to survive.

References



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