



# Foods from the Forest: A Nutritional Analysis of Wild Plant Foods Used by the Baka Forager-Horticulturalists in Southeastern Cameroon



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## Background and research problem

It is more common in public health to draw upon hunter-gatherer lifestyle and dietary practice to help solve the increasing prevalence of non-communicable diseases<sup>1</sup>.

Ethnographic studies on extant hunter-gatherers play a crucial role in reconstructing past hominin subsistence behaviours throughout the evolution of our lineage<sup>2</sup>.

Earlier nutritional investigations have focused mostly on African populations from savannas. Little attention has been given to nutrient variation across habitats<sup>3</sup>.

Tropical rainforests have been deemed too hostile for prehistoric human occupation and are understudied. But, rainforests have been of key significance to our ancestors<sup>4</sup>.

Hunter-gatherer dietary practice is often recruited as a reference standard for the evolution of human nutrition<sup>5</sup>, neglecting the plurality of dietary practices and cultural trajectories within our deep past.

The Baka are a group of forager-horticulturalists, of which around 40,000 individuals live in Cameroon<sup>6</sup>. They can survive by foraging for prolonged periods of time within a rainforest environment<sup>7</sup>.

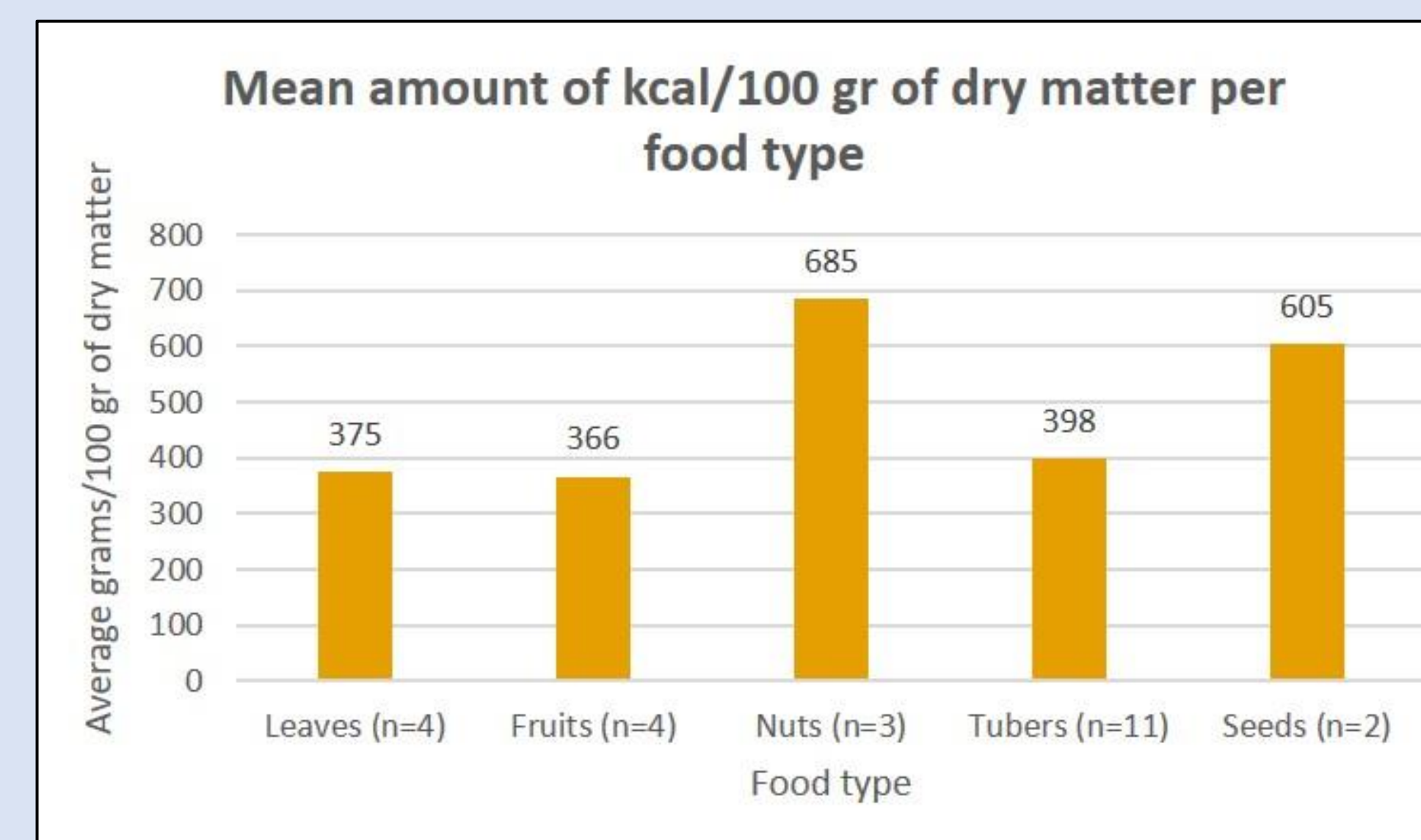
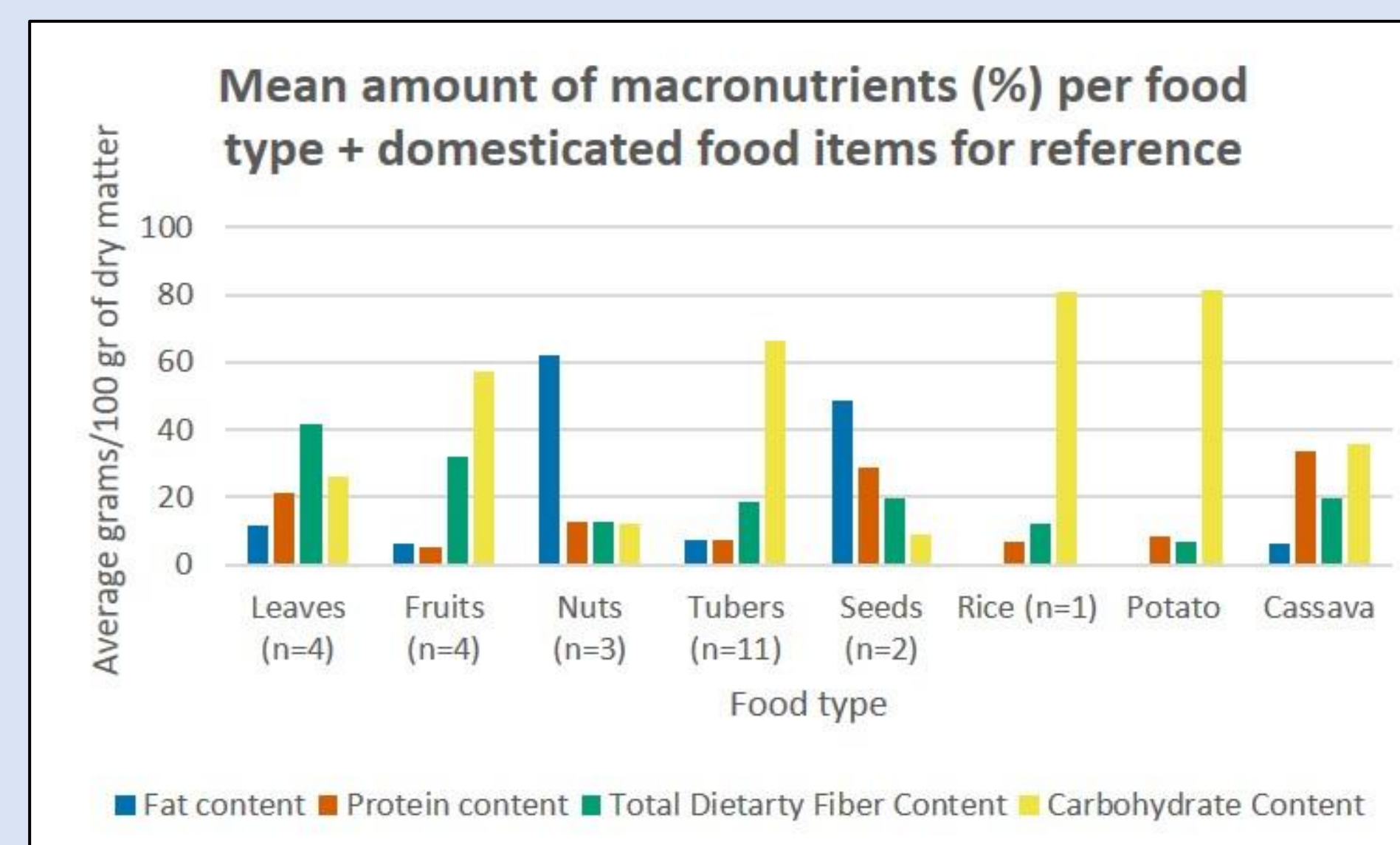
Studying the macronutritional composition of Baka wild edible plant foods bolsters our insight into the nutritional and dietary composition of foraging groups within the African rainforest.

Here, we present macronutritional data on 17 unique wild plant taxa.

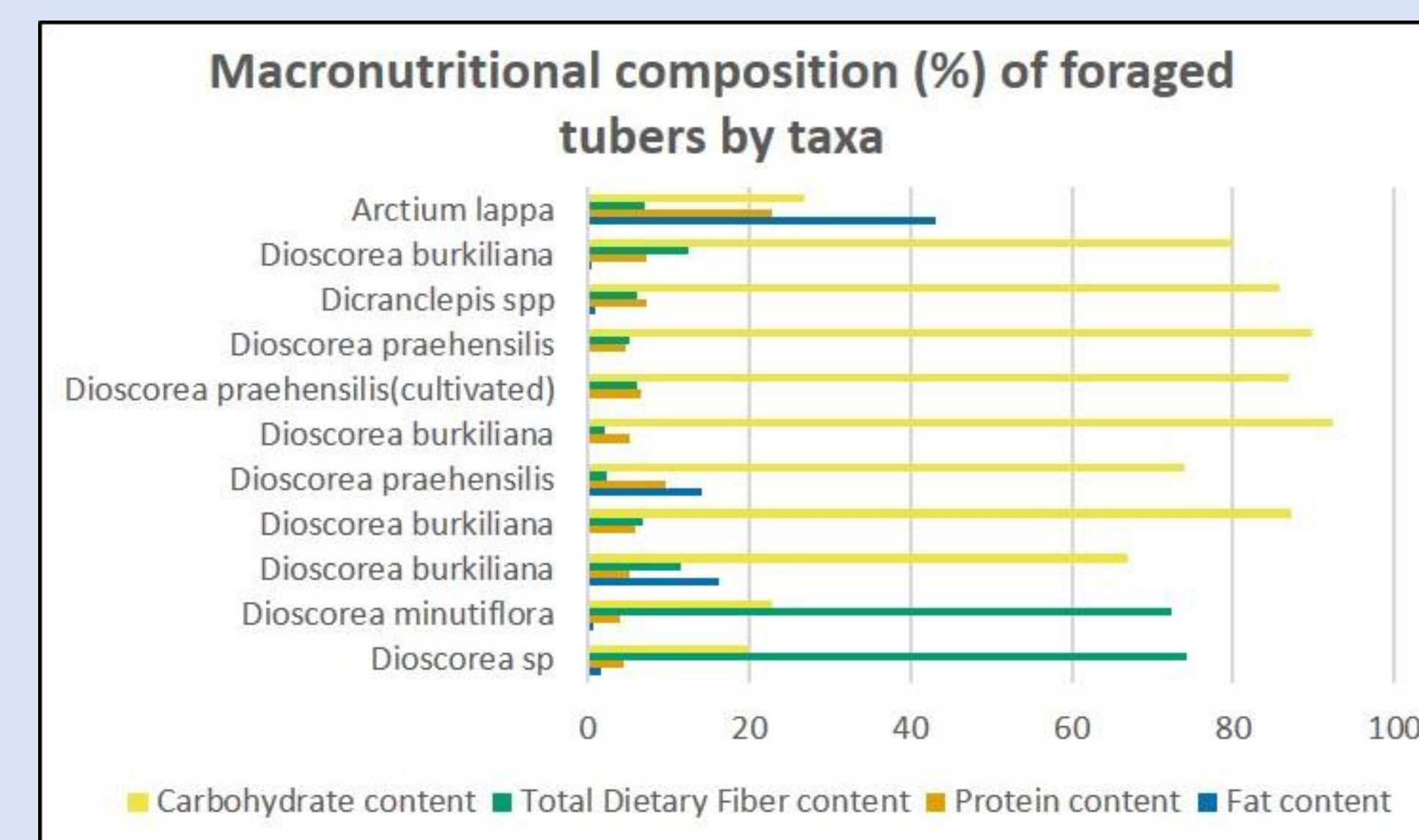
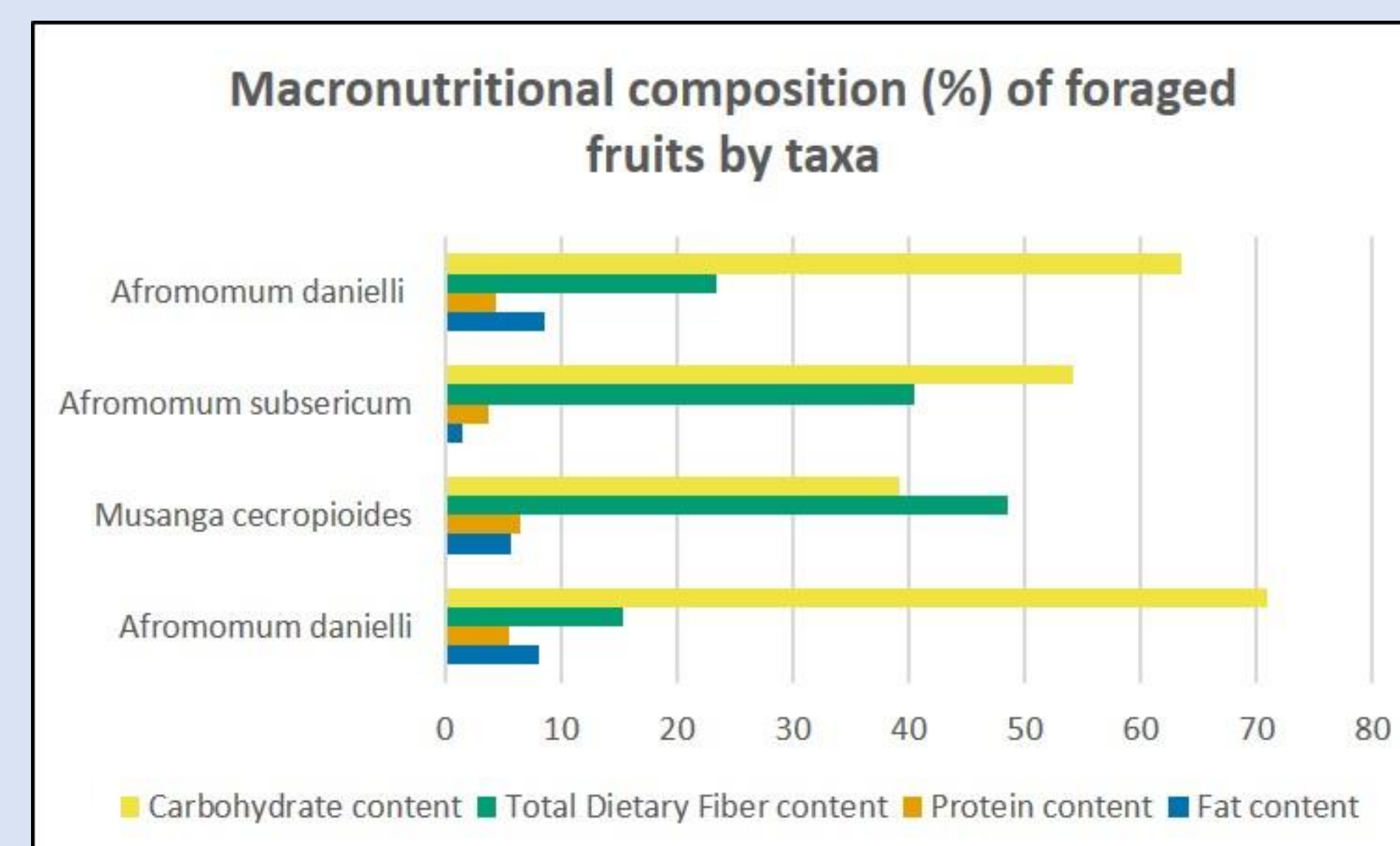
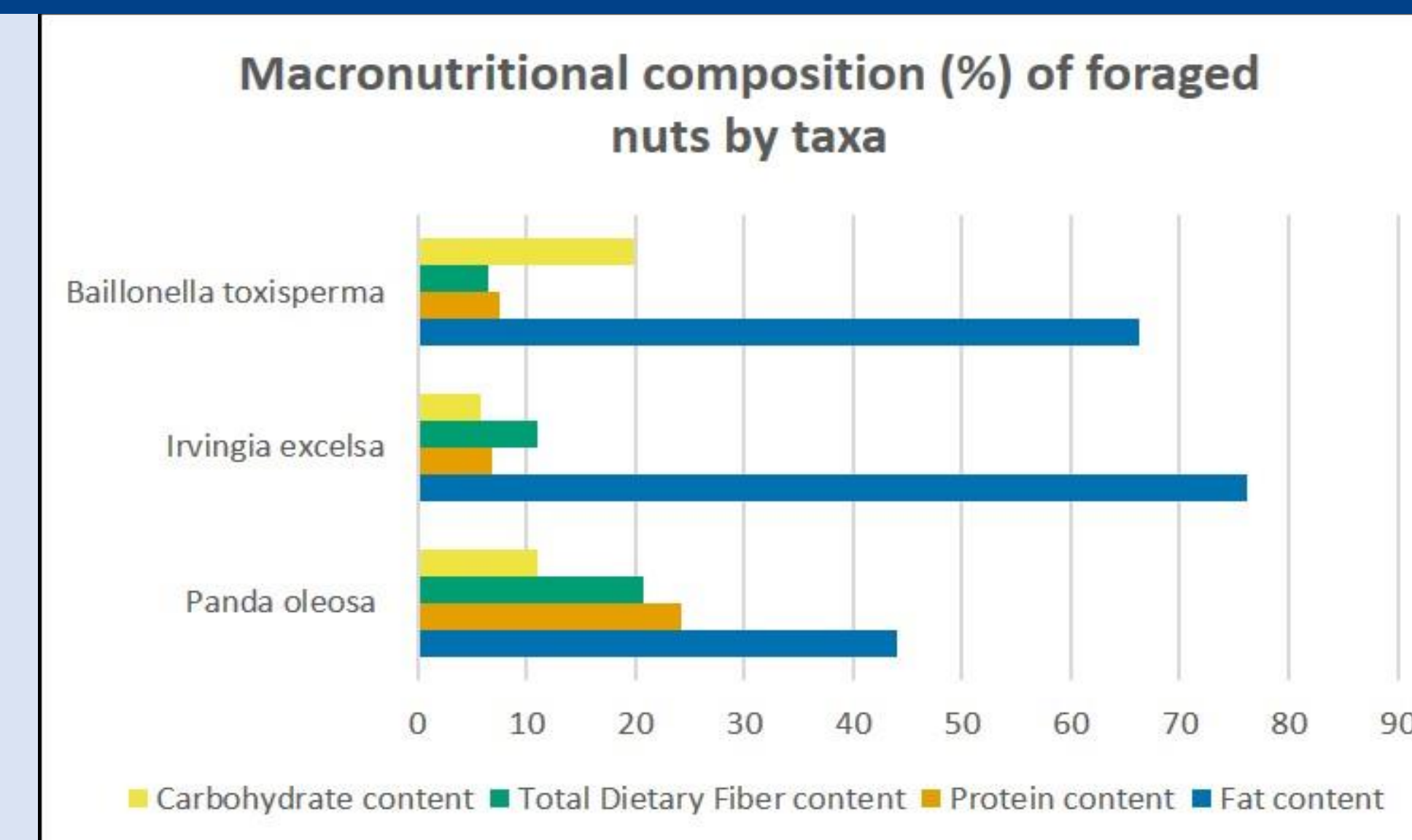
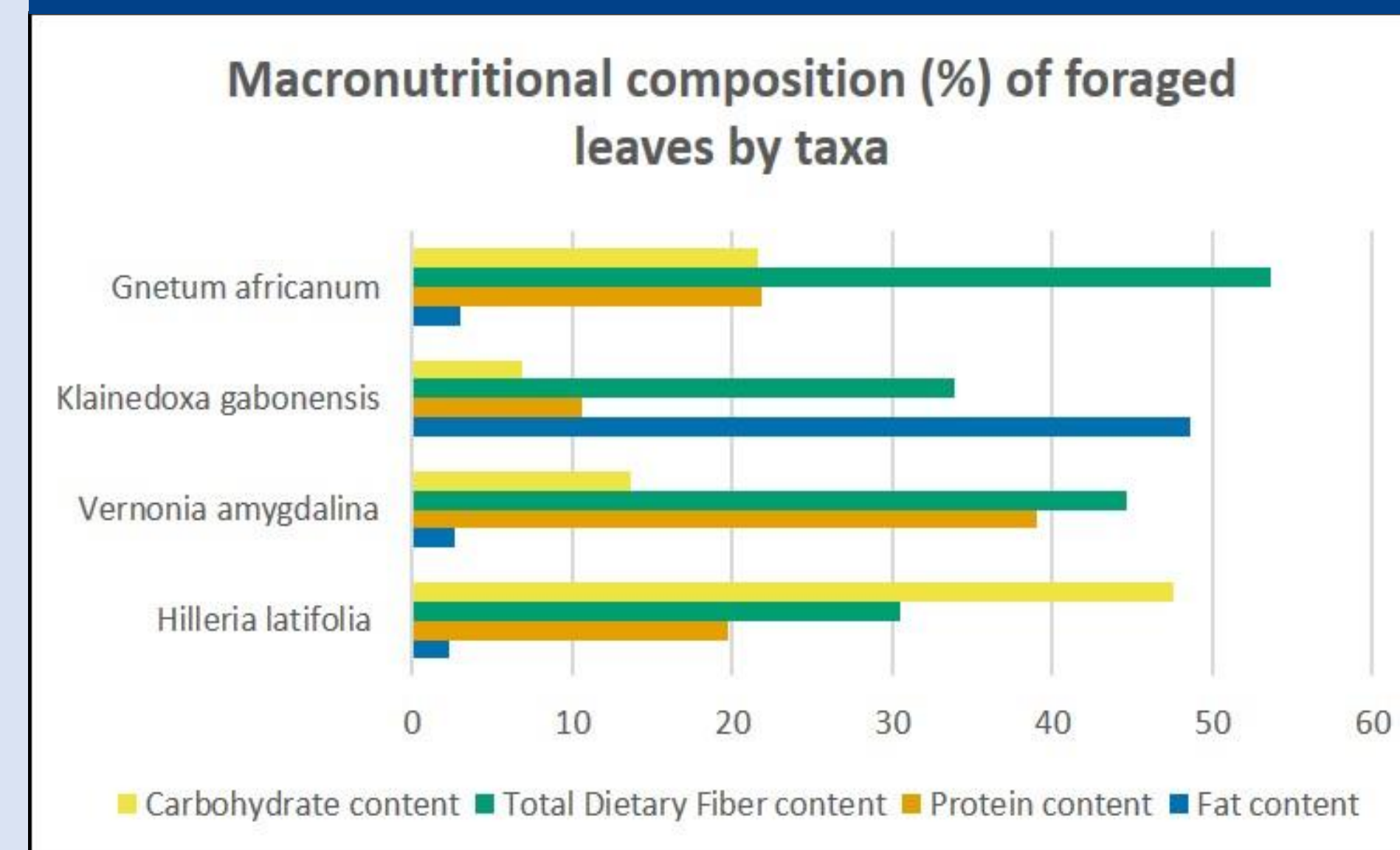


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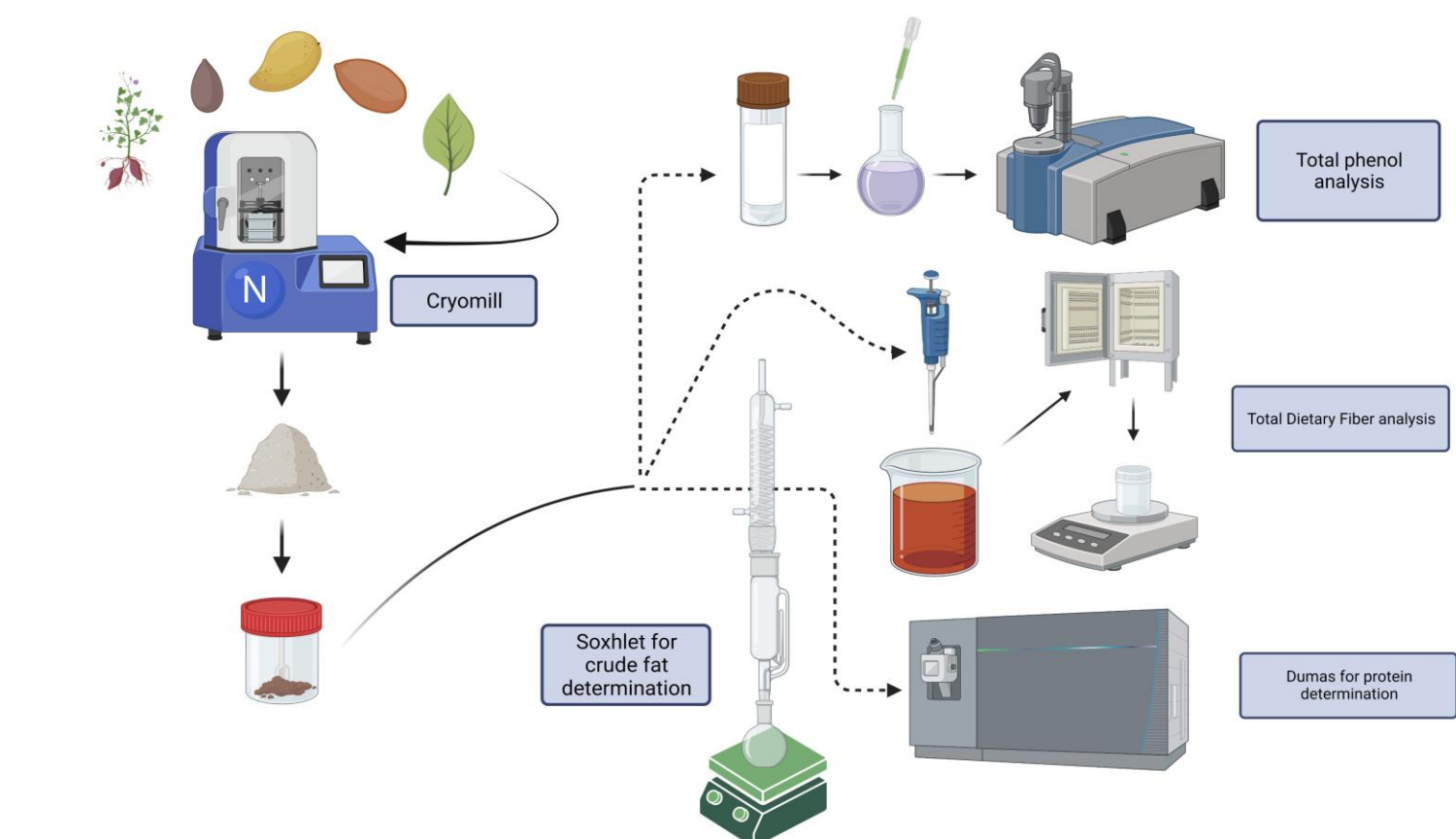
## The nutritional composition of wild plant foods foraged by the Baka



## Macronutritional composition per food type



## Methods



## Research aim

**Main research aim:** establishing a macronutrient profile of wild edible plant foods foraged by the Baka forager-horticulturalists in southeastern Cameroon.

**Future research:** Comparing the dietary composition of the Baka and the Baka macronutrient profile, to that of other foraging societies in variable habitats.

We aim to substantiate the claim that the rainforest environment has been crucial to the evolution of our lineage, and that rainforests were occupied by pre-agrarian populations.

## Conclusions

**Tubers are the main supplier of carbohydrates**, containing the most starch out of all available food items.

**Nuts and seeds are high in fat** relatively to all other food types. *Klainedoxa gabonensis* is particularly high in fat for the leaf type. *Arctium lappa* tubers are contain significantly more fat than other tubers.

**Total dietary fiber is highest in leaves**, followed by fruits. **Fruits are substantially higher in carbohydrate content** in comparison to leaves. Instead, leaves are the main plant-based protein source, alongongside *Arctium lappa* tubers and *Panda oleosa* nuts.

**Within species variation** occurs in carbohydrate and total dietary fiber values for *Dioscorea* tubers. The variation is likely caused by plant age.

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This study adheres to the Code of Ethics of the International Society of Ethnobiology. The project was approved by the Ethics Committee of the Ministry of Health of Cameroon (n°2018/06/1049/CE/CNERSH/SP).