



## Ethno-Nutritional Uses of Wild Edible Vegetables in Ogun Waterside Rural Communities Ogun State, Nigeria

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**ABSTRACT:** The food insufficiency, high costs and unreliable availability of healthy, nutritious food have led to the pursuit of alternative sources of nutritious, cheap and safe food such as wild edible vegetables (WEVs). Hence, the objective of this paper was to identify and obtain the ethno-nutritional uses of wild edible vegetables in Ogun waterside rural communities, Ogun State, Nigeria using appropriate standard procedures. The results revealed that the major plant parts utilized for various culinary and nutritional purposes were the leaves, seeds, stems, fruits, bulbs and rhizomes. The most used WEVs as raw vegetables or cooked soups were *Vernonia amygdalina* (0.77), *Talinum triangulare* (0.72), *Telfairia occidentalis* (0.67) and *Corchorus olitorius* (0.62) as evident from the values of the relative frequency of citation. In this study, 56.5% of the vegetables cited were consumed freshly or cooked as soups, while 26% are used as spices or processed into condiments to impart food flavour, aroma and taste of their foods. Also, 17.4% of these plant species had multiple edible uses. Information obtained on WEVs may be useful in identifying their potential nutritional uses and increasing dietary diversity as valuable food sources if sustainably cultivated which could become a crucial approach to tackling food insecurity.

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Nutritional security is a critical problem that many countries of the world are being faced with most especially developing countries. Food shortage, exorbitant costs and uncertain availability of wholesome food, have led to the pursuit of cost-effective, alternative sources of nutritious and safe food like wild edible vegetables (WEVs). WEVs are referred to as uncultivated plants but have some nutritive values and dietary properties (Guatam *et al.*, 2021). They exist in many forms such as edible buds, flowers, fruits, seeds, leaves, leafy herbs, rhizomes and edible tuberous roots that are eaten as foods (Guatam

*et al.*, 2021). Currently, WEVs are gradually gaining wide acceptance because they contain rich dietary constituents that are crucial for overall well-being (Oseni and Babatunde, 2015). In Nigeria, where starchy foods are a predominant component of the daily diet, WEVs have assumed a central role in the nutrition of both rural and city inhabitants (Adjatin *et al.*, 2013). In rural communities like Ogun Waterside, a considerable number of rural dwellers depend on wild edible vegetables for livelihood for a very long time to achieve part of their daily food intake (Rafiqul-Islam *et al.*, 2019). Thus, the impact of WEVs on the

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means of sustenance and food availability to the local communities cannot be overemphasized as they are traded as means of sustenance (Rafiqul-Islam *et al.*, 2019). Hence, the addition of WEVs can impact positively, achieving the objectives of the United Nations on Sustainable Development Goals of eradicating malnutrition and hunger (Singh *et al.*, 2020). This is because hunger and malnutrition hinder renewable growth by decreasing productivity, exacerbating the risk of diseases and restricting prospects for improving sustenance. Moreover, previous findings hint that wild edible vegetables possess exceptional natural nutritional compounds essential for proper body development in contrast to agricultural food crops (Alam *et al.*, 2020; Khan *et al.*, 2016). In recent times, people are more aware of the medicinal value of WEVs together with their nutritional benefits (Asaye *et al.*, 2023; Grace and Kayode 2018). However, owing to diverse environmental factors, the availability of WEVs and connected native are intelligence decreasing rapidly. The utilization of WEVs not only impacts the dietary multiplicity of rural people (Dejene *et al.*, 2020) but also stands as an approach to magnify the beneficial value of food (Asfaw *et al.*, 2023; Ickowitz *et al.*, 2016). Despite tremendous uses, WEVs are constantly being neglected and underutilized in favour of exotic species, despite their richness in vital nutrients which are crucial to overall health benefits (Njume *et al.*, 2014). Furthermore, the potential of WEVs for income generation is still hidden, due to a lack of awareness and their commercial potentials are not being properly utilised (Matenge *et al.*, 2012). The increasing

disappearance of WEVs from our surroundings has become more prevalent which may be primarily attributed to inadequate conservation strategies, excessive exploitation and the absence of modern agricultural techniques that can effectively safeguard the population of these plant resources (Amujoyegbe *et al.*, 2007). Hence, it is necessary to properly document these important genetic resources. This study therefore investigates the ethno-nutritional uses of wild edible vegetables in Ogun waterside rural communities, Ogun State, Nigeria.

## MATERIALS AND METHODS

**Study area:** The study was conducted in the Ogun waterside Local Government Area (LGA), situated on the South eastern coast of Ogun State, Nigeria, along the Bight of Benin. This area covers about 1026 square kilometres and is inhabited by a population of 103,200. It is located at latitude 6° 28' 59" N, and longitude 4° 23' 59" E (Wikipedia 2024). Ogun waterside is surrounded by Ijebu-East LGA to the Northwest and Odigbo, Okiti-pupa and Ilaje LGAs, and Ondo State in the Northeast, East and Southeast respectively. It is also adjacent to Epe LGA and the Atlantic Ocean in the West and South respectively. The foremost occupations of the indigenous people in these locations include farming, fishing, hunting and sand mining. Eleven randomly selected local communities namely: Abigi, Aiyede-ayila, Ebute-oni, Efire, Ibiade, Ilushin, Imakun-omi, Ita-otu, Itebu, Ita-ogun and Iwopin were concentrated on for the study (Fig. 1).

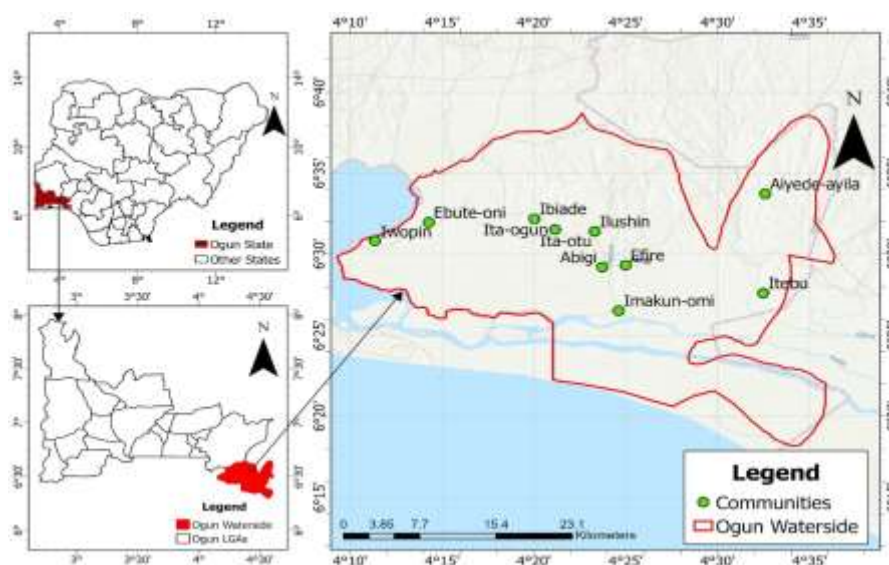


Fig. 1: Study locations in Ogun waterside rural communities, Ogun state, Nigeria

**Data collection:** Ethno-botanical data was gathered through the collection of plant species and semi-structured interviews among 120 respondents using group discussions. Eleven communities in Ogun waterside, Ogun state, Nigeria namely; Abigi, Aiyede-ayila, Ebute-oni, Efire, Ibiade, Ilushin, Imakun-omi,

Ita-otu, Itebu, Ita-ogun and Iwopin were objectively chosen to investigate the wild edible vegetables utilization. The informants who are versed in the use of WEVs in each location sampled were employed in the interview to obtain community-level information on WEVs consumed in each locality. The free listing

approach which required participants to list the names of all WEVs collected in their communities was used. Nutritional details about each sampled plants was given by the informants. Also, local names of all the WEVs collected were noted and herbarium specimens for each of the plant species were processed and kept in the Forest Herbarium Ibadan.

The relative frequency of citation (RFC) of WEVs was estimated as the amount of informants who cited the use of wild edible vegetables divided by the total amount of informants who participated in the survey. The RFC value usually ranges from 0 to 1, which can be used as a measure of the cultural use of WEV individually (Sabith *et al.*, 2023).

## RESULTS AND DISCUSSION

In this study, 23 wild edible vegetables spread across 21 genera and 12 families were reported as edible vegetables in the Ogun waterside rural communities, Ogun State. The prominent families among these species are *Asteraceae* and *Lamiaceae*, each with 4 species, followed by *Amaranthaceae*, *Cucurbitaceae*, *Fabaceae*, *Malvaceae* and *Solanaceae* (2 species), while other families have 1 species each (Table 1). However, in a related study focusing on edible vegetable diversity in Benin, the result obtained was

similar where the species were majorly from the *Amaranthaceae*, *Asteraceae*, *Cucurbitaceae*, *Fabaceae* and *Solanaceae* families (Achigan-Dako *et al.*, 2011). Furthermore, wild edible vegetables like *Basella alba*, *Celosia leptostachya*, *Clerodendrum volubile*, *Corchorus olitorius*, *Crassocephalum ruibens*, *Jatropha tajorensis*, *Moringa oliefera*, *Launaea taraxacifolia*, *Solanecio biafrae*, *Solanum americanum*, *Talinum triangulare* and *Vernonia amygdalina* were consumed raw as vegetables, or cooked soups.

**Table 1:** Families of wild edible vegetables mentioned in the study locations

Botanical family	Quantity of plant species mentioned
Asteraceae	4
Lamiaceae	4
Amaranthaceae	2
Cucurbitaceae	2
Fabaceae	2
Malvaceae	2
Solanaceae	2
Amaryllidaceae	1
Basellaceae	1
Euphorbiaceae	1
Moringaceae	1
Taliaceae	1

Source: Survey (2023)

**Table 2:** Wild edible vegetables consumed in Ogun waterside rural communities, Nigeria

Botanical name	Family	Local name	*RFC	Nutritional uses
<i>Abelmoscus esculentus</i> Moench	Malvaceae	Ila	0.13	Fruits and leaves are cooked as draw soup
<i>Allium sativum</i> Linn	Amaryllidaceae	Alubosa ayu	0.25	Matured bulbs are eaten as a food spice
<i>Amaranthus spinosus</i> Linn	Amaranthaceae	Dagunro	0.05	Fresh leaves are prepared as soup
<i>Basella alba</i> Linn	Basellaceae	Amunututu	0.22	Matured leaves are consumed fresh or cooked as soup
<i>Beilschmiedia manii</i> (Meisn) R.	Lamiaceae	Bokonisha	0.20	Matured seeds are processed locally and eaten as food
<i>Celosia leptostachya</i> Benth.	Amaranthaceae	Ajefawola	0.02	Succulent leaves are cooked as soup
<i>Clerodendrum volubile</i> P. Beauv.	Lamiaceae	Marugbo	0.23	Matured leaves are prepared as vegetable soup
<i>Corchorus olitorius</i> Linn	Malvaceae	Ewedu	0.62	Fresh leaves are cooked and served as draw soup
<i>Crassocephalum ruibens</i> S. (Juss Ex Jacq.) Moore	Asteraceae	Ebolo	0.32	Tender leaves are eaten as soup
<i>Cucurbita pepo</i> Linn	Cucurbitaceae	Elegede	0.13	Seeds are prepared locally and eaten as food
<i>Jatropha tajorensis</i> J.L. Ellis & Saroja	Euphorbiaceae	Iyanapaja	0.40	Succulent leaves are cooked as soup
<i>Launaea taraxacifolia</i> (Willd.) Amin	Asteraceae	Efo yanrin	0.10	The whole plant is served as salads/vegetable
<i>Moringa oliefera</i> Lam	Moringaceae	Ewe igbale	0.22	Matured leaves are eaten fresh as a vegetable
<i>Ocimum bacilicum</i> Linn	Lamiaceae	Efinrin wewe	0.18	Fresh leaves are consumed fresh and as food spice
<i>Ocimum gratissimum</i> Linn	Lamiaceae	Efinrin nla	0.35	Fresh leaves are eaten raw and as food spice
<i>Parkia biglobosa</i> (Jacq.) R.Br. ex G. Don	Fabaceae	Iru	0.30	Matured seeds are processed locally into soup condiments
<i>Prosopis africana</i> (Guill. & Perr.) Taub.	Fabaceae	Ogiri	0.25	Matured seeds are processed locally into stew/soup condiment
<i>Solanecio biafrae</i> Oliv. & Hiern.	Asteraceae	Woorowo	0.05	Succulent leaves/stems are cooked as soup
<i>Solanum americanum</i> Mill	Solanaceae	Efo odu	0.10	Succulent leaves are cooked as food
<i>Solanum macrocarpon</i> Linn	Solanaceae	Efo igbo	0.17	Leaves and fruits are prepared as soup
<i>Talinum triangulare</i> (Jacq.) Willd	Talinaceae	Gbure	0.72	Fresh leaves/stems are cooked as soup
<i>Telfairia occidentalis</i> Hook. F.	Cucurbitaceae	Ugu	0.67	Leaves are eaten fresh or cooked as soup
<i>Vernonia amygdalina</i> Del.	Asteraceae	Ewuro	0.77	Fresh leaves are prepared as soup

\*RFC: Relative frequency of citation for each wild edible vegetable mentioned.

Source: Survey 2023

While others (*Beilschmiedia manii*, *Parkia biglobosa* and *Prosopis africana*) are subjected to some traditional processing methods (such as boiling, soaking, and fermentation) and eaten as condiments.

Whereas, *Allium sativum*, *Ocimum bacilicum* and *Ocimum gratissimum* were used as food spices. Vegetable species like *Telfairia occidentalis*, *Solanum macrocarpon*, *Cucurbita pepo* and *Abelmoscus*

*esculentus* were identified to have multiple edible uses (Table 2). Similarly, *Vernonia amygdalina* (0.77), *Talinum triangulare* (0.72), *Telfairia occidentalis* (0.67) and *Corchorus olitorius* (0.62) were regarded as the most notable wild vegetables, as evident from their RFC values obtained from the informants within Ogun waterside rural communities (Table 2).

Of the culinary uses of all the WEVs mentioned by the respondents 56.5% for various use categories were either consumed as salad ingredients as garnish for various local dishes or cooked as vegetable soups. While 26% were used as seasoning and condiments to improve the food aroma, flavour and taste. Meanwhile, 17.4 % of the wild edible vegetables mentioned can be used in more than one way (Table 3). However, the most utilized WEVs as key ingredients in indigenous soup preparations and dishes are *Corchorus olitorius*, *Vernonia amygdalina*, *Telfairia occidentalis*, *Talinum triangulare*, *Solanum macrocarpon*, *Solanum americanum*, *Celosia leptostachya*, *Launaea taraxacifolia*, *Solanecio biafrae*. Fruits of *Abelmoscuscus esculentus* are cooked as soup, while the seeds of *Parkia biglobosa*, *Prosopis africana*, *Cucurbita pepo*

and *Beilschmiedia manii* are mainly processed under specific procedures into more nutritious foods (as condiments). This report was similar to an ethnobotanical study previously reported for *Prosopis africana*, *Irvingia wimbolu*, *Celosia argentea*, *Parkia biglobosa* and *Corchorus olitorius* (Shomkegh *et al.*, 2013). The utilization of WEVs by the local inhabitants in food specifically at the rainy periods when many of the vegetables were available, corroborates the previous report (Shomkegh *et al.*, 2013). In addition, the extensive knowledge of these wild resources by the rural inhabitants underscores their significant role as dietary components, forming an integral part of their diets. Conversely, this present report affirms that leaves are the most consumed plant part in the sample. This result aligns with previous studies that have also highlighted leaves as the dominant plant part (Bammou *et al.*, 2015; Umartani and Nahdi, 2021; Manlosa *et al.*, 2019; Welcome and Van 2019; Olowo *et al.*, 2022). The extensive use of leaves may be attributed to the fact that leaves often serve as a storage site for essential micronutrients and bioactive compounds accountable for the plant's biological properties (El Finou *et al.*, 2023).

**Table 3.** Wild edible vegetables consumed as food in various use categories

Use category	Edible part	Number of species used	Percentage of species used
Vegetable/soup	Leafy stems	13	56.5%
Spices	Herb and spice	3	13.0%
Condiments	Edible seeds	3	13.0%
Multiple uses	All the parts	4	17.4%
Total		23	100 %

Source: Authors' work

**Conclusion:** This study revealed the usefulness of wild vegetables as a vital source of indigenous vegetables that contribute to the dietary needs and sustainability of the local communities in Ogun waterside. These species provide an indigenous means of solving multiple food choices, nutritional gaps and overall well-being in Ogun waterside, Nigeria. The WEVs are integrated into the indigenous knowledge and habits of the area through the indigenous culinary dishes of the region. This study also provides valuable insights that can be harnessed to promote these plant species for wider utilization and encourage further studies on the nutritional assessment and potential toxicity of wild vegetables. This will help in identifying those species that may supply a wealth of vital nutrients which can function as health-boosting foods and avoid those that may contain compounds which could pose health risks. Indigenous knowledge about plant use associated with various communities needs to be preserved for future generations to prevent knowledge erosion. It is important to prioritize the cultivation of these bioresources as a vital aspect of conservation and improving biocultural resilience.

**Declaration of conflict of Interest:** The authors declare no conflict of interest

**Data availability statement:** Data are available upon request from the corresponding author or any of the other authors

## REFERENCES

- Achigan-Dako, E; N'Danikou, S; Assogba-Komlan, F *et al* (2011). Diversity, geographical, and consumption patterns of traditional vegetables in sociolinguistic communities in Benin: Implications for domestication and utilization. *Econ. Bot.* 65: 129–145. <http://doi.org/10.1007/s12231-011-9153-4>
- Adjatin, A; Alexandre, D; Marius, EB; Laura, EL; Myriame, D; Pauline, A *et al* (2013). Proximate, minerals and vitamin C composition of vegetables Gbolo [*Crassocephalum rubeus* (Juss. Ex Jacq.) S. Moore and *Crassocephalum crepidioides* (Benth) S. Moore in Benin. *J. Biol. Chem. Sci.* 7(1): 319–331.
- Alam, MK; Rana, ZH; Islam, SN; Akhtaruzzaman, M (2020). Comparative assessment of nutritional composition, polyphenol profile, antidiabetic and antioxidative properties of selected edible wild plant species of Bangladesh. *Food Chem.* 320: 126646.



- Amujoyegbe, BJ; Obisesan, IO; Ajayi, AO; Aderanti, FA (2007). Disappearance of Kersting's groundnut (*Macrotyloma geocarpum*) (Harns) Marechal and Baudet in Southern Nigeria: An indicator of genetic erosion. *Plant Genetic Res. Newsletter* 152: 45–50.
- Asfaw, A; Lulekal, E; Bekele, T; Debella, A; Tessema, S; Meresa, A; Debebe, E (2023). Ethnobotanical study of wild edible plants and implications for food security. *Trees, Forests and People* 14(100453): 2–11. <https://doi.org/10.1016/j.tfp.2023.100453>
- Bammou, M; Daoudi, A; Sellam, K; Rhaffari, L; Ibjibjen, J; Nassiri, L (2015). Ethnobotanical survey of Asteraceae family used in Meknes-Tafilalet region, Morocco. *Inter. J. Innov. Appl. Stu.* 13(4): 789–815.
- Dejene, T; Agamy, MS; Agúndez, D; Martin-Pinto, P (2020). Ethnobotanical survey of wild edible fruit tree species in lowland areas of Ethiopia. *Forests* 11(2): 177.
- El-Finou, H; Salhi, N; Halmoune, A; El-Rhaffari, L (2023). Ethnobotanical survey of aromatic and medicinal plants used in traditional medicine and agri-food in the Fez-Meknes Region. *Biol. Med. Nat. Prod. Chem.* 12(1): 135–143. <https://doi.org/10.14421/biomedich.2023.121.135-143>.
- Gautam, RS; Shrestha, SJ; Shrestha, I (2021). Ethnobotanical Review of Wild Edible Plants of Nepal. *J. Nat. Hist. Muse.* 32(22): 87–136.
- Grace, OO; Kayode, J (2018). Ethno-medicinal assessment of wild edible plants in Ijesa Region, Osun State, Nigeria. *Bulletin Pure Appl. Sci.* 37(2): 89–107.
- Ickowitz, A; Rowland, D; Powell, B; Salim, MA; Sunderland, T (2016). Forests, trees, and micronutrient-rich food consumption in Indonesia. *PLoS One* 11(5): e0154139.
- Joshi, SK; Ballabh, AH; Negi, PS; Dwivedi, SK (2018). Diversity, distribution, use pattern and evaluation of wild edible plants of Uttarakhand, India. *Defence Life Sci.* 3(2): 126–135. <https://doi.org/10.14429/dlsj.3.12579>.
- Khan, H; Jan, SA; Javed, M; Shaheen, R; Khan, Z; Ahmad, A; Safi, SZ; Imran, M (2016). Nutritional composition, antioxidant and antimicrobial activities of selected wild edible plants. *J. Food Biochem.* 40 (1): 61–70.
- Manlosa, AO; Hanspach, J; Schultner, J; Dorresteijn, I; Fischer, J (2019). Livelihood strategies, capital assets and food security in rural Southwest Ethiopia. *Food Security* 11: 167–181. <https://doi.org/10.1007/s12571-018-00883-x>
- Matenge, S; Li, J; Apau, S; Tapera, R (2017). Nutritional and phytochemical content of indigenous leafy vegetables consumed in Botswana. *Frontiers in Food Nutri. Res.* 3(1): 1–7
- Ngone, AM; Ndam, LM; Mih, AM (2016). Survey of wild vegetables in the Lebiale Highlands of southwestern Cameroon. *J. Plant Sci.* 4(6): 172–184.
- Niveditha, TM; (2017). Wild edible plants of India- a review. *Int. J. Academic Res.* 4(3): a025. ISSN: 2348-7666.
- Njume, C; Goduka, NI; George, G (2014). Indigenous leafy vegetables in South Africa: A rich and unexplored source of nutrients and antioxidants. *Afr. J. Biotechnol.* 13(9): 1933–1942.
- Nutuli, NR; Zobolo, AM; Siebert, SJ et al. (2012). Traditional vegetables of northern KwaZulu-Natal, South Africa: Has indigenous knowledge expanded the menu? *Afri. J. Agricultural Res.* 7(45): 6027–6034. <https://doi.org/10.5897/AJAR11.2195>.
- Olowo, SF; Omotayo, AO; Lawal, IO; Ndhlovu, PT; Aremu, AO (2022). Ethnobotanical use-pattern for indigenous fruits and vegetables among selected communities in Ondo State, Nigeria. *South Afri. J. Bot.* 145: 501–511. <https://doi.org/10.1016/j.sajb.2022.03.040>.
- Oseni, K; Babatunde, O (2015). Underutilised indigenous vegetables in Nigeria: A rich source of nutrients and antioxidants – A Review. *Annals. Food Sci. Technol.* 16(2): 236–247
- Rafiqul-Islam, AT; Das, SK; Alam, MF; Rahman, AH (2019). Documentation of wild edible minor fruits used by the local people of Barishal, Bangladesh with emphasis on traditional medicinal values. *J. Biosci.* 27: 69–81. <https://doi.org/10.3329/jbs.v27i0>.
- Sabith, R; Zafar, I; Rahmatullah, Q; Muhammad, Y (2023). Ethno-medicinal study of medicinal plants used by the inhabitants of tribal District North Waziristan, Khyber Pakhtunkhwa, Pakistan. *Ethnobot. Res. Appli.* 26: 68–100. <http://dx.doi.org/10.32859/era.26.68.1-32>
- Shomkegh, SA; Mbakwe, R; Dagba, BI (2013). Ethnobotanical survey of edible wild plants in Tiv communities of Benue State, Nigeria. *J. Nat. Sci. Res.* 3(7): 17–23.

- Singh, A; Dubey, RK; Bundela, AK; Abhilash, PC (2020). The Trilogy of Wild Crops, Traditional Agronomic Practices and Un-Sustainable Development Goals 10, MDPI publishers, Pp. 648.
- Singh, B; Sultan, P; Hassan, QP; Gairola, S; Bedi, YS (2016). Ethnobotany, traditional knowledge and diversity of wild edible plants and fungi: a case study in the District of Kashmir Himalaya, India. *J. Herbs, Spices Med. Plants* 22(3): 247–278. <https://doi.org/10.1080/10496475.2016.1193833>.
- Tahir, M; Abraham, A; Beyene, T; Dinsa, A et al. (2023). The traditional use of wild edible plants in pastoral and agro-pastoral communities of Mieso District, Eastern Ethiopia. *J. Trop. Med. Heal.* 51(10): 1–15. <https://doi.org/10.1186/s41182-023-00505-z>,
- Tardío, J; Pardo de Santayana, M (2008). Cultural importance indices: a comparative analysis based on the useful wild plants of Southern Cantabria (Northern Spain). *Econ. Bot.* 62: 24–39. <https://doi.org/10.1007/s12231-007-9004-5>.
- Turner, NJ; Łuczaj, LJ; Migliorini, P; Pieroni, A; Dreon, A.L; Sacchetti, LE; Paoletti, MG (2011) Edible and tended wild plants. *Crit. Rev. Plant Sci.* 30(1): 198–225. <https://doi.org/10.1080/07352689.2011.554492>.
- Umartani, LA; Nahdi, MS (2021). Ethnobotanical study of edible plant communities on the slopes of mount Merapi and Merbabu, Indonesia. *Biol. Med. Nat. Prod. Chem.* 10(1): 33–39. <https://doi.org/10.14421/biomedich.2021.101.33-39>.
- Upreti, Y; Poudel, R; Shrestha, KK; Rajbhandary, S; Tiwari, NN; Shrestha, UB; Asselin, H (2012). Diversity of use and local knowledge of wild edible plant resources in Nepal. *J. Ethnobiol. Ethnomed.* 8(16). <https://doi.org/10.1186/1746-4269-8-16>.
- Welcome, AK; Van Wyk, BE (2019). An inventory and analysis of the food plants of southern Africa. *South Afr. J. Bot.* 122: 136–79.
- Wikipedia, (2024). <https://www.wikipedia.com/ogunwatersidepopulation/lga/ogunstate>. Assessed on 25 April 2023.