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Research Article

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An Inventory of Medicinal and Poisonous Plants of the National Veterinary Research Institute Vom, Plateau State, Nigeria

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Abstract

Traditional medicinal plants are still commonly used for primary healthcare in developing countries, and this study seeks to identify the types of medicinal plants present in our community and document the knowledge of poisonous plants. The study area was divided into four blocks, and the plants within each block were identified through a field survey using Android phones equipped with Google lens and GPS. Local and scientific names of the medicinal plants were identified using photographs, herbaria, and references. The study found a total of 98 medicinal plant species belonging to 41 plant families, with Fabaceae, Euphorbiaceae, and Lamiaceae families having the highest number of species. This study is significant for conserving traditional medicinal plants and adding to the inventory of medicinal plants in the area for conservation purposes. Furthermore, it is essential for public health and safety, as proper identification of medicinal plants is crucial to avoid poisoning.

Keywords: Traditional Knowledge, Medicinal Plants, National Veterinary Research Institute, Conservation, Field Survey, Plant Identification, GPS

1. Introduction

In developing countries, traditional medicinal practices are still commonly used for primary healthcare, with 80% of the world's population reported to use traditional medicine by the World Health Organization [1-3]. Medicinal plants are classified into three categories, namely traditional medicinal plants, modern medicinal plants, and potential medicinal plants, based on their usage and scientific validation [4,5]. Traditional medicinal plants refer to plant species that have been used for medicinal purposes for centuries, and their efficacy is based on traditional knowledge and practices. Modern medicinal plants have been scientifically studied and proven to contain bioactive compounds with medicinal properties, and potential medicinal plants are those that are believed to have bioactive compounds that may possess medicinal properties but require further research and testing to validate their therapeutic potential [6,7]. The use of plants for medicinal purposes dates back to ancient times, but the exploitation of plant resources for various uses has led to the extinction of several plant species due to deforestation and lack of knowledge regarding their importance [8]. The loss of plant genetic resources due to exploitation and deforestation poses a threat to food security. Although the use of medicinal plants is still prevalent in Nigeria, proper identification of these plants is crucial as misidentification can result in poisoning [9]. In Nigeria, medicinal plants are commonly used, and natural remedies are preferred over synthetic ones. However, the loss of plant genetic resources due to exploitation and deforestation poses a threat to food security. Wild plants offer a natural source of herbal remedies, but proper identification is essential to avoid poisoning [9]. The National Veterinary Research Institute (NVRI) , is a potential location for medicinal plants that has not been extensively studied. Therefore, this study aims to identify the types of medicinal plants present in this location and document the knowledge of poisonous plants. Field guides and textbooks such as those by Akobundu and Agyakawa, Arbonnier, Kurian, and Kurian

provide valuable plant names, descriptions, and other educative information for researchers and can be useful tools for teaching purposes [10-13]. This study is necessary to conserve traditional medicinal plants and to add to the knowledge already gathered about medicinal plants in the area systematically. The findings of this study can aid researchers working on medicinal plants found in this environment and contribute to the inventory of medicinal plants in this area for conservation purposes. Furthermore, the study seeks to document the knowledge of poisonous plants in the area, which can be useful for public health and safety. This research study focuses on a case study of the medicinal plant biodiversity identified at NVRI.

2. Materials and Methods

2.1 Study Area

The study was conducted in Vom town, situated in central Nigeria on the Jos Plateau, near the source of the Kaduna River, approximately 18 miles (29 km) southwest of Jos town. Vom is home to the National Veterinary Research Institute (NVRI), established in 1924, and Western Africa's first veterinary school, established in 1942.

2.2 Sampling

The study area was divided into four blocks: the Administrative block, the Junior staff quarters block, the Senior staff quarters block, and the National Institute of Trypanosomiasis Research (NITR) environment block. The plants within these blocks (figure 3 and figure 4) were identified through a field survey. Android phones equipped with Google lens and GPS were used to capture the coordinates of the plants. The National Veterinary Research Institute is located in Jos South Local Government Area of Plateau State (figure 1)

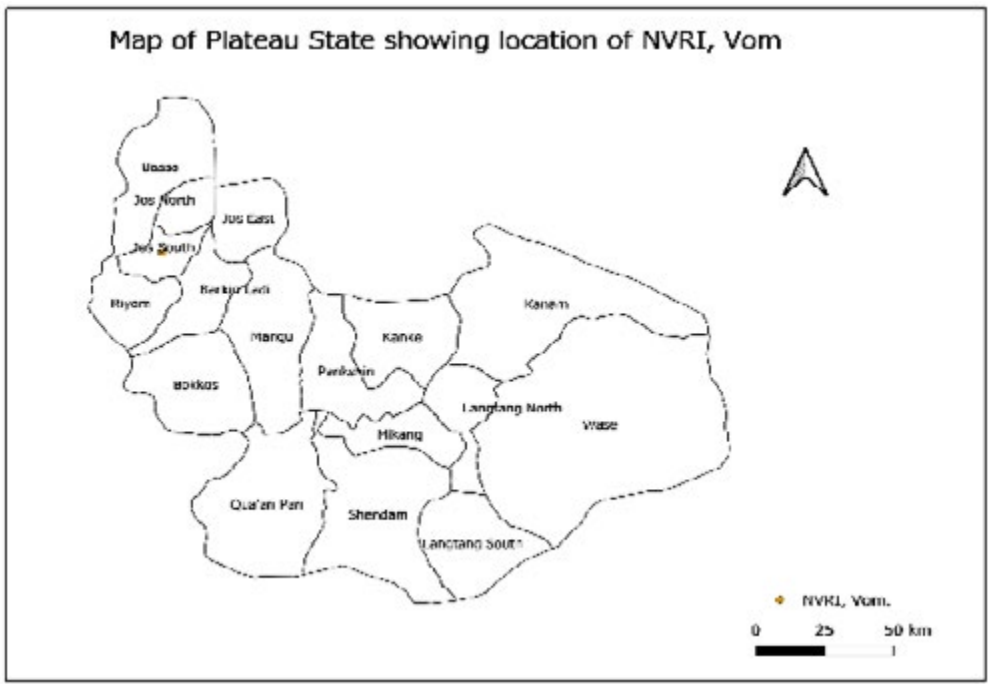

Figure 1: The map of Plateau State showing the study site – National Veterinary Research Institute in Vom, Jos South Local Government Area.

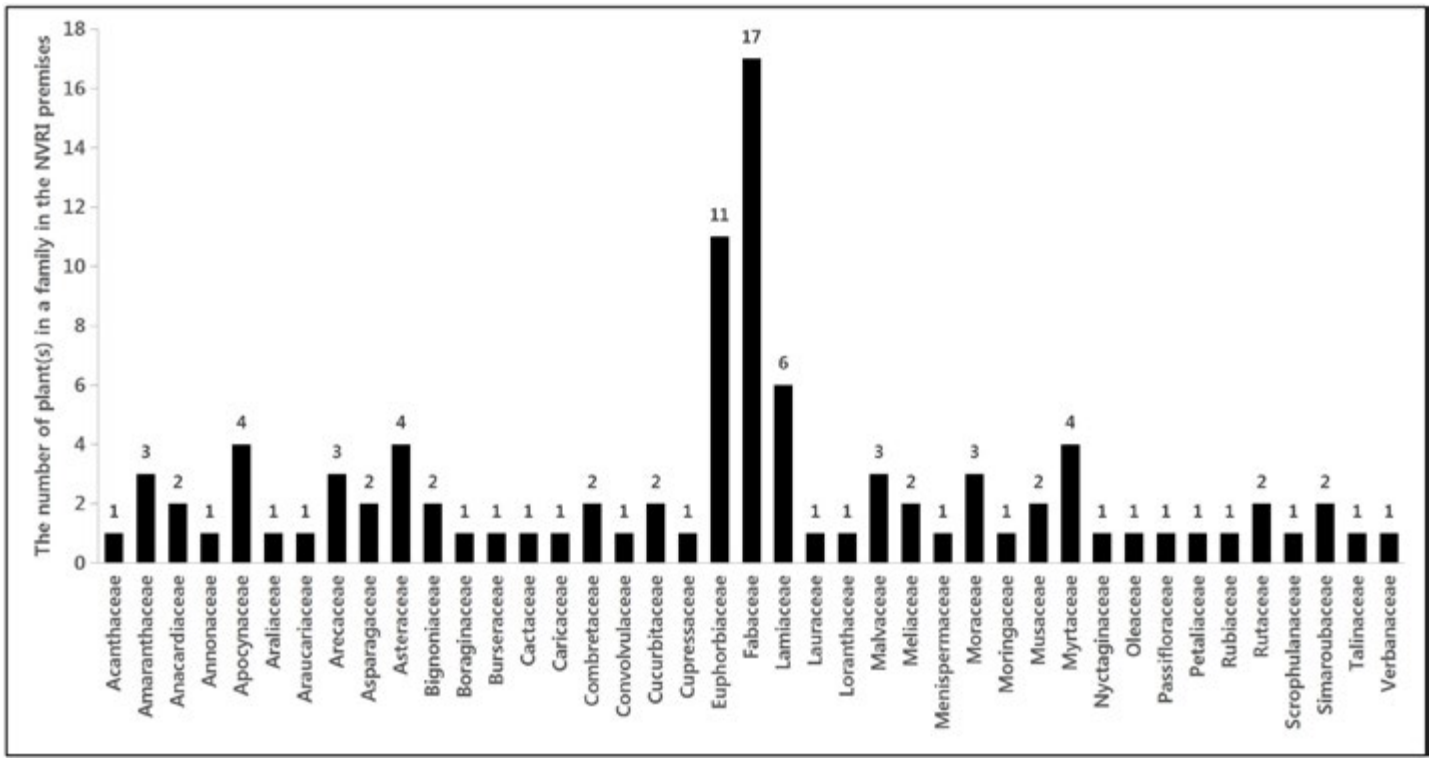

Figure 2: Family distribution of medicinal plants found in NVRI, Vom.

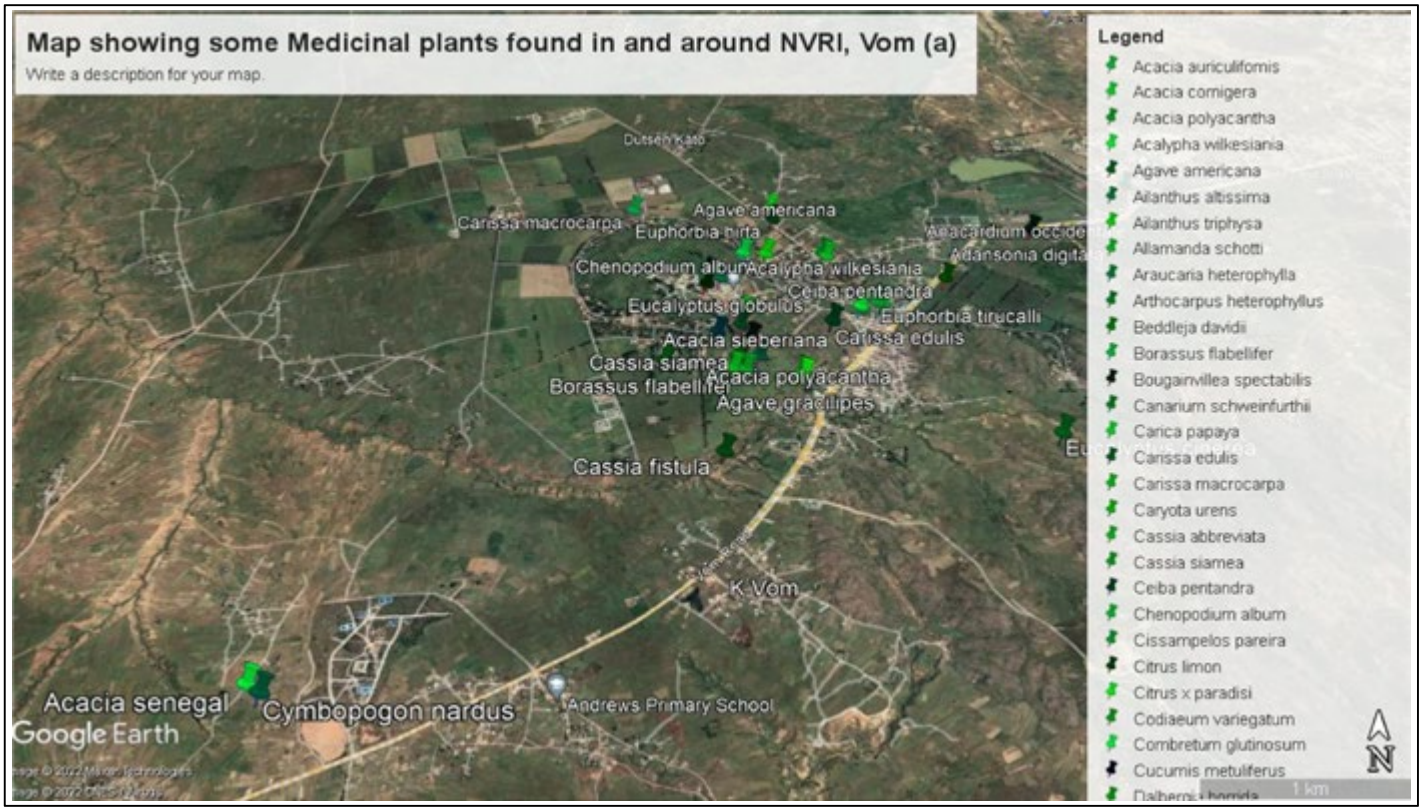

Figure 3: Google earth Geographical positioning of some plants in the NVRI premises.

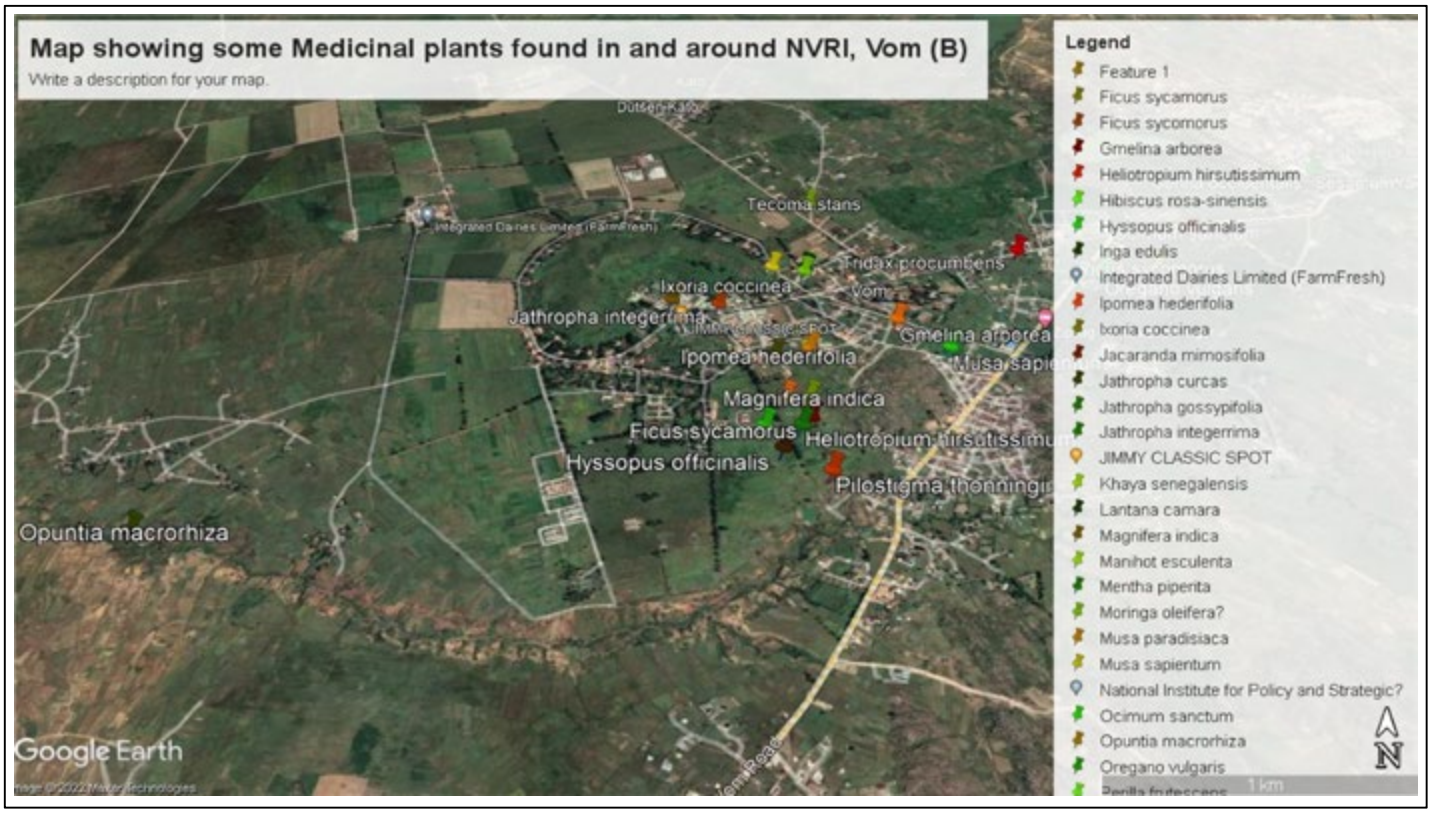

Figure 4: Google earth geographical positioning of other plants identified in the NVRI premises.

2.3 Data Collection

The medicinal plants within the study area were identified using Android phones equipped with Google lens (https://lens.google.com/). The plants were photographed and matched with those in the phone's plant identification app. Local names of the medicinal plants were identified through the knowledge of the local community and traditional practitioners. The scientific names were identified using photographs, herbaria, and references [14,15]. Digital images of the plants were also obtained for further research and documentation purposes. GPS was used to record the coordinates of the medicinal plants [16] .

3. Results and Discussion

Figure 2 shows the distribution of medicinal plants within the NVRI (National Veterinary Research Institute) in Vom, Nigeria, organized by family. The graph contains information on the number of medicinal plants found in each family, ranging from 1 to 17. The total number of plant families listed in the table (table 1) is 41. The family with the highest number of occurrence of medicinal plants is Fabaceae with 17 plants, followed by Euphorbiaceous with 11 plants, and then Lamiaceae with 6 plants. These three families combined account for more than half of the total number of medicinal plants found in the NVRI. Other families with a significant number of medicinal plants include Apocynaceae, Myrtaceae, Asteraceae, and Amaranthaceae. The importance of these plant families lies in the fact that they contain a high number of medicinal plants, which could potentially be useful for human and animal health.

Fabaceae, for example, is known to contain compounds that have anti-inflammatory, antimicrobial, and anti-cancer properties, among others [17]. Euphorbiaceae is also known for its medicinal properties, including its use in the treatment of skin diseases and as an analgesic [18]. Lamiaceae, on the other hand, is known for its use in the treatment of respiratory and digestive disorders, as well as its antimicrobial properties [19]. Amaranthaceae plants are known to possess antidiabetic, antihypertensive, antioxidant, and anticancer properties. *Chenopodium album*, a member of this family, has been used to treat diabetes and high blood pressure [20]. The Apocynaceae plants are known to possess antitumor, antimalarial, and anti-inflammatory properties. *Catharanthus roseus,* a member of this family, has been used to treat cancer, malaria, and diabetes [21]. Asteraceae plants are known to possess antidiabetic, anti-inflammatory, and antioxidant properties. *Artemisia annua*, a member of this family, has been used to treat malaria, diabetes, and inflammation [22].

No.	Scientific Name	Family	Common Name	Type	Latitude	Longitude	Uses	Reference
1	*Acacia sieberiana*	Fabaceae	Paper bark thorn	Tree	N9°43′28.05422′′	E8°47′23.88509′′	M	Maphosa et al. 2006
2	*Acacia auriculifomis*	Fabaceae	Earleaf acacia	Tree	N 9°43′46. 5888″,	E 8°47′14. 81532″	M	Baskaran et al. 2021
3	*Acacia cornigera*	Fabaceae	Bull horn acacia	Tree	N 9°43′31. 3986″,	E 8°47′40. 90704″	M	Flores-Vindas et al. 2021
4	*Acacia polyacantha*	Fabaceae	Hook thorn	Tree	N 9°43′16. 01724″,	E 8°47′34. 22868″	M	Ngure et al. 2016
5	*Acacia senegal*	Fabaceae	Gum Arabic	Tree	N 9°42′4.4 3052″,	E 8°46′3.2 3364″	M	Ahmed et al. 2013
6	*Acacia terminalis*	Fabaceae	Sunshine wattle	Shrub	N 9°43′20. 40852″,	E 8°47′6.4 2408″	M	Nasri et al. 2012
7	*Acalypha wilkesinia*	Euphorbiaceae	Jacob's coat, Copper leaf	Shrub	N 90°43′55.82496′′,	E 80°47′22.84156′′	M	Ayoola et al. 2016
8	*Agave americana*	Asparagaceae	American aloe, Century plant	Herb	N 9°44′13. 47432″,	E 8°47′29 23656″	M	Adelaja et al. 2018
9	*Agave gracilipes*	Asparagaceae	Agave	Shrub	N 9°43′16. 60908″,	E 8°47′33 72036″	P	Palma-Ramos et al. 2012
10	*Ailanthus altissima*	Simaroubaceae	Tree of heaven	Tree	N 9°43′46. 59276″,	E 8°47′14. 81532″	M	Zhang et al. 2012
11	*Ailanthus triphysa*	Simaroubaceae	White pall	Tree	N 9°43′46. 59024″,	E 8°47′ 14. 81532″	M	Kumar et al. 2012
12	*Allamanda schotti*	Apocynaceae	Bush allamanda	Climber	N 9°43′18. 21288″	E 8°47′20. 32656″	M	Guzman-Gutierrez et al. 2014
13	*Anacadum occidentale*	Anacardiaceae	Cashew, Indian almond	Tree	N9044′5.16876′′	E80 48′28.5516′′	M	Olajide et al. 2017
14	*Andasonia digitata*	Malvaceae	Baobab tree	Tree	N90 44′5.57952′′	E80 48′28.67899′′	M	Ahmed et al. 2014
15	*Araucaria heterophylla*	Araucariaceae	Norfolk pine	Shrub	N 9°43′20. 40852″	E 8°47′6.4 2408″	M	Conran et al. 2009
16	Artocarpus heterophyllus	Moraceae	Jack fruit tree	Tree	N 9°43′56.45172″	E 8°47′40.32492″	M	Nor et al. 2022
17	*Atriplex semilunaris*	Amaranthaceae	Salt bushes	Tree	N 9°43′35. 5242″	E 8°47′22. 56288″	M	Mtimet et al. 2019
18	*Azadiracta indica*	Meliaceae	Dogonyaro, neem	Tree	N9°43′46.58664′′	E8°47′24.79336′′	M	Sharma et al. 2021
19	*Basella alba*	Amaranthaceae	Malaba spinach, Vine spinach	Shrub	N9 044′2326524′′	E80 48′54.1332′′	M	Biswas et al. 2000
20	*Beddleja davidi*	Scrophulanaceae	Butterfly bush, Summer lilac	Shrub	N 9°43′21. 74736″	E 8°47′25. 61064″	M	Zhang et al. 2021
21	*Borassus flabelliffa*	Arecaceae	Tal palm, wine/doub palm	Tree	N 9°43′17. 82336″	E 8°47′22. 79148″	M	Kalpana et al. 2021
22	*Bougainvillea spectabilis*	Nyctaginaceae	Great bougainvillea	Shrub	N 9°43′31. 3986″	E 8°47′40. 90704″	M	Suhaimi et al. 2021
23	*Caesalpinia pulcherrima*	Fabaceae	Pride of Barbados	Tree	N 9°43′16. 60908″	E 8°47′33 72036″	M	Vinothkumar et al. 2021
24	*Canarium schweinfurthii*	Burseraceae	Atili tree, Bush candle	Tree	N 9°43′37.3692″	E 8°47′47.35788″	M	Adebiyi et al. 2021
25	*Carica papaya*	Caricaceae	Gwanda, Paw paw	Herb	N 9°43′55.98804″	E 8°47′40.6248″	M	Singh et al. 2021
26	*Carissa edulis*	Apocynaceae	Bago Zaakii, Carrisse	Tree	N 9°43′31.3986″	E 8°47′40.90704″	M	Alhassan et al. 2021
27	*Carissa macrocarpa*	Apocynaceae	Amatungulu, Natal plum	Shrub	N 9°44′12.18012″	E 8°46′57.77004″	M	Oyedemi et al. 2021
28	*Caryota urens*	Arecaceae	Palm	Tree	N 9°43′48.13716″	E 8°47′15.11887568″	M	Sharma et al. 2021
29	*Cassia abbreviata*	Fabaceae	Long tail Cassia	Shrub	N 9°43′31.3986″	E 8°47′21.90704″	M	Muteva et al. 2021
30	*Cassia fistula*	Fabaceae	Golden shower tree	Tree	N90 42′55.58328′′	E80 47′18.429′′	M	Mandal et al. 2021
31	*Cassia siamea*	Fabaceae	Seemia, Kassod tree	Tree	N 9°43′20.40852″	E 8°47′6.42408″	M	Sharma et al. 2021
32	*Ceiba pentandra*	Malvaceae	Rimi, Kapok tree	Tree	N 9°43′47.168″	E 8°48′6.51348″	M	Wang et al. 2021
33	*Chenopodium album*	Amaranthaceae	Goose foot plant	Weed	N9°43′55.59708′′	E8°47′27.8088′′	M	Srivastava et al. 2021
34	*Cissampelos pareira*	Menispermaceae	Velvet leaf, Perreira brava	Climber	N 9°43′16.60908″	E 8°47′33.72036″	M	Singh et al. 2021
35	*Citrus limon*	Rutaceae	Babban lemu	Tree	N 9°43′54.97464″	E 8°47′41.27964″	M	Ansari et al. 2021
36	*Citrus x paradisi*	Rutaceae	Grapefruit	Tree	N9°42′27.05422′′	E8°47′2388500′′	M	Singh et al. 2021
37	*Codiaeum variegatum*	Euphorbiaceae	Garden croton, Croton petra	Shrub	N 9°43′21.48492″	E 8°47′21.16032″	M	Pandey et al. 2021

38	Combretum glutinosum	Combretaceae	Dooki	Shrub	N9°43'38.52544''	E8°47'52.07704''	M	Odeyemi et al. 2021
39	*Crotalaria retussa*	Fabaceae	Rattle weed	Shrub	N 9°43'29.06904"	E 8°47'22. 56288"	M	Singh et al. 2021
40	*Cucumis metuliferus*	Cucurbitaceae	Spike melon	Climber	N9°42'2.88388''	E8°46'5.7226''	M	Ukwuani et al. 2021
41	*Darbergia horrida*	Fabaceae	Prickly dalbergia	Tree	N 9°43'20. 40852"	E 8°47'6.4 2408"	M	Singh et al. 2021
42	*Eucalyptus cinera*	Myrtaceae	Argyle apple	Tree	N 9°43'37. 8804"	E 8°47'27. 52152"	M	Zhou et al. 2021
43	*Eucalyptus globulus*	Myrtaceae	Blue gum	Tree	N 9°43'46. 58664"	E 8°47'14. 79336"	M	Li et al. 2021
44	*Eucalyptus urnigera*	Myrtaceae	Urn gum tree	Tree	N9°43'46.58666''	E8°47'14.79356''	M	Singh et al. 2021
45	*Euphorbia camerronica*	Euphorbiaceae	Kamerunica	Herb	N 9°43'35. 5242"	E 8°47'22. 56288"	P	Tiepma et al. 2021
46	*Euphorbia hirta*	Euphorbiaceae	Asthma weed	Weed	N90 44'8.97828''	E80 47'29.72256''	M	Elisha et al. 2023
47	*Euphorbia tirucalli*	Euphorbiaceae	Pencil cactus	Herb	N90 43'38.51544''	E88947'51.07704''	M/P	Singh et al. 2021
48	*Ficus sycomorus*	Moraceae	Sycamore, Fig mulberry	Tree	N9°43'23.24596''	E8°47'27.02726''	M	Fahmy et al. 2021
49	*Ficus trichopoda*	Moraceae	Rubber fig	Fig tree	N90 43'56.23068''	E80 48'21.11688''	M	Nunez-Elizaide et al. 2021
50	*Gmelina arborea*	Lamiaceae	Melina, Beech wood	Tree	N 9°43'43. 62672"	E 8°47'40. 5136"	M	Gakwavu et al. 2021
51	*Heliotropium hirsutissimum*	Boraginaceae	Scorpion plant	Tree	N 9°43'21. 76284"	E 8°47'25. 83168"	M	Abdu-Aguye et al. 2021
52	*Hibiscus rosa sinesis*	Malvaceae	Shoe black plant	Shrub	N 9°43'37. 8804"	E 8°47'27. 52152"	M	El-Sayed et al. 2021
53	*Hyssopus officinalis*	Lamiaceae	Hyssop	Herb	N 9°43'17.5908"	E 8°47'23.19684"	M	Aras et al. 2022
54	*Inga edulis*	Fabaceae	Ice cream Bean	Tree	N 9°43'47.38404"	E 8°47'7.97568"	M	Lago et al. 2022
55	*Ipomea hederifolia*	Convolvulaceae	Scarlet morning glory	Herb	N 9°43'35.5242"	E 8°47'22.56288"	M	Silva et al. 2021
56	*Ixoria coccinea*	Rubiaceae	Flame of the wood	Shrub	N 9°43'54.89364''	E 8°47'27.66876''	M	Jirasiritham et al. 2021
57	*Jacaranda memosifolia*	Bignoniaceae	Jacaranda	Tree	N 9°43'47.38296"	E 8°47'7.98612"	M	Ojo et al. 2022
58	*Jasminum sambac*	Oleaceae	Arabian jasmine	Shrub	N 9°42'6.8 8212"	E 8°46'4.4 7312"	M	Al-Fatimi et al. 2021
59	*Jathropha curcas*	Euphorbiaceae	Barbados nut	Herb	N 9°43'56.28576''	E 8°48'21.18456''	M	Sharma et al. 2021
60	*Jathropha gossipifolia*	Euphorbiaceae	Tua-Tua	Tree	N90 43'56.01108''	E80 47'27.86784''	M	Ouédraogo et al. 2021
61	*Jatropha integerrima*	Euphorbiaceae	Peregrina	Tree	N 9°43'46.58916"	E 8°47'14.81532"	M	Pathirana et al. 2021
62	*Jatropha tanorensis*	Euphorbiaceae	Chaya	Shrub	N90 43'47.38548''	E80 47'7.96776''	M	Oladeji and Adeniyi, 2020
63	*Juniper communis*	Cupressaceae	Common Juniper	Tree	N9°43'21.46908"	E8°47'20.94468"	M	Li et al. 2021
64	*Khaya senegalensis*	Meliaceae	Madaci, African mahogany	Tree	N9°43'21.72072"	E8°47'20.94288"	M	Elisha et al. 2012
65	*Lantana camara*	Verbanaceae	Kimba maharba, Lantana	Shrub	N9°43'47.38512"	E8°47'7.97064"	M	Kasote et al. 2021
66	*Magnifera indica*	Anacardiaceae	Mangga, Mango	Tree	N9°43'27.15422''	E8°47'23.89508''	M	Patel and Goyal, 2021
67	*Manihot esculenta*	Euphorbiaceae	Cassava, Tapioca	Shrub	N9°43'37.3692"	E8°47'47.35788"	M	Ogunleye et al. 2020
68	*Mentha piperita*	Lamiaceae	Pepper Mint Plant	Herb	N9^{0} 43'56.23104''	E80 48'21.1176''	M	Morteza-Semnani et al. 2021
69	*Moringa oliefera*	Moringaceae	Drum stick, Moringa	Tree	N9°43'37.3693"	E8°47'47.35788"	M	Mohanraj et al. 2021
70	*Musa paradisiaca*	Musaceae	Agada, Plantain	Shrub	N9°43'37.3692"	E8°47'47.35788"	M	Raja et al. 2022
71	*Musa sapientum*	Musaceae	Ayaba, Banana	Shrub	N90 43'37.3692''	E80 47'47.35788''	M	Zongshi et al. 2022
72	*Nelsonia canescens*	Acanthaceae	Tsamiya maharba, Sniper rifle	Shrub	N9°42'59.0784''	E8°48'22.04056''	M	Adedapo and Akinpelu, 2021
73	*Occimum sanctum*	Lamiaceae	Scent leaf	Herb	N90 44'5.57952''	E80 48'48'28.899''	M	Gupta et al. 2022
74	*Opuntia macrorhiza*	Cactaceae	Cactus, prickly pear	Herb	N9°43'4.43052"	E8°46'3.23364''	M	Wang et al. 2021
75	*Origanum vulgaris*	Lamiaceae	Wild marjoram, origan	Herb	N90°43'54.3828",	E80°48'12.474"	M	Mardani et al. 2022
76	*Passiflora edulis*	Passifloraceae	Grenadelle, passion flower	Vine	N9°42'2.88388''	E8°46'5.7126''	M	Dourado et al. 2021

77	*Perilla frutescens*	Lamiaceae	Red perila	Herb	N 90°43'55.82496'',	E 80°47'22.84156''	M/P	Lin et al. 2019
78	*Persea americana*	Laureaceae	Avocado, pear	Tree	N9°43'37.3692",	E8°47'47.35788"	M	Moghaddam et al. 2019
79	*Pilostigma thonningii*	Fabaceae	Camel foot Tree	Tree	N9°43'13.47432",	E8°47'29.24656"	M	Adetutu et al. 2012
80	*Plumeria rubra*	Apocynaceae	Frangipani	Tree	N 9°43'37.8804"	E 8°47'27.52152"	M	Singh et al. 2017
81	*Polyalthia longifolia*	Annonaceae	Ashoka	Tree	N9°43'27.05422''	E8°47'23.88508''	M	Jabeen et al. 2021
82	*Psidium guajava*	Myrtaceae	Guava	Tree	N 9°43'37.3692"	E 8°47'47.35788"	M	Silva et al. 2013
83	*Ricinus communis*	Euphorbiaceae	Castor oil plant	Shrub	N 9°43'37.3692''	E 8°47'27.52152"	M	Kaur et al. 2013
84	*Roystonea regia*	Arecaceae	Royal palm	Tree	N 9°43'55.59708''	E 8°47'27.8088''	M	Govindarajan et al. 2015
85	*Schefflera digitata*	Araliaceae	Patete, Seven fingers	Tree	N 9°42'6.8 8212"	E 8°46'4.4 7312"	M	Ncube et al. 2012
86	*Senna alata*	Fabaceae	Candle bush	Shrub	N9°43'55.6752''	E8°47'27.81996''	M	Srivastava et al. 2015
97	*Senna occidentalis*	Fabaceae	Albarka, Coffee senna	Shrub	N 9°44'23.26524''	E 80°48'54.1332''	M	Lai et al. 2022
88	*Sesamum radiatum*	Petaliaceae	Black benni seed, sesame	Tree	N 9°44'23.26524''	E 80°48'54.1332''	M	Alagbonsi et al. 2021
89	*Talinum triangulare*	Talinaceae	Gbure, water leaf	Herb	N 9°43'56.42184''	E 80°48'21.35052''	M	Adedapo et al. 2021
90	*Tamarindus indica*	Fabaceae	Tsamiya, Tamarind	Tree	N9°43'59.04372''	E8°47'28.45536''	M	Singh et al. 2021
91	*Tapinanthus sp.*	Loranthaceae	Parasite	Tree	N9°43'52.91032''	E8°47'25.35324''	M	Adeyemi et al. 2021
92	*Taraxacum dens-leonis*	Asteraceae	Dandelion plant	Weed	N 9°43'37.3692''	E 8°47'47.35788''	M	Li et al. 2022
93	*Tecoma stans*	Bignoniaceae	Yellow elder	Shrub	N9°44'13.47432"	E8°47'29.23656"	M	Alves et al. 2022
94	*Telfairia occidentalis*	Cucurbitaceae	Ugu leaf, Fluted pumpkin	Climber	N9°44'13.47432"	E8°47'29.23656"	M	Oboh et al. 2021
95	*Terminalia catappa*	Combretaceae	Wawan kurmi, Almond fruit	Tree	N9°43'37.8804''	E8°47'27.52252''	M	Huy et al. 2022
96	*Tridax procumbens*	Asteraceae	Chamba, Coat buttons	Weed	N9°44'0.6	E8°48'0.6 9428"	M	Ismail and Marjan, 2021
97	*Venonia amygdalina*	Asteraceae	Ewuro, Bitter leaf	Herb	N9°43'37.3692"	E8°47'47.35788"	M	Nwidu et al. 2021
98	*Venonia polysphaera*	Asteraceae	Ewuro, Assa-peixe	Tree	N9°43'37."	E8°47'27.52152"	M	Ajibesin et al. 2022

Table 1: Displays the Inventory of Medicinal Plant Species Identified within the Nvri Environment, Their Scientific Names, Families, Local Names, Common Names, Habitats (Gps Coordinates) And Toxicity Status.

The study revealed a total of 98 plant species belonging to 41 families. The most common families among them were the Fabaceae, Euphorbiaceae, Lamiaceae, Apocynaceae, Myrtaceae, Asteraceae, Amaranthaceae, and Moraceae. The largest proportion of medicinal plant species belong to the families Fabaceae (17%), Euphorbiaceae (11%), Lamiaceae (6%), Asteraceae (4%), Apocynaceae (4%), Myrtaceae (4%), and Moraceae (3%) in decreasing order of frequency.

It is noteworthy that most of the plant species listed in Table 1 are believed to be non-toxic and have various medicinal uses. They can be used to cure a range of ailments depending on their preparation and administration. The identification of these plants and their medicinal properties can be useful in the development of traditional medicines and the promotion of their sustainable use. A number of plant species similar to the ones found in the National Veterinary Research Institute (NVRI) (figure 3 and figure 4) environment have been identified and documented by various authors, including Akobundu and Agyakawa, Arbonnier, Kurian, and Kurian [10-13]. Among these plant species, the Fabaceae family has the highest number of species with 17 plants. This family is ranked third in terms of species richness at a global level after Asteraceae and Orchidaceae [23]. Fabaceae species are known for their various uses, including as a source of food and dietary protein, such as Glycine max, Phaseolus, Pisum sativum, and Arachis hypogaea [24]. Moreover, Fabaceae is the second largest family of medicinal plants, with about 490 species recorded to have medicinal properties [25].

In addition to Fabaceae, other plant species found in the NVRI environment, such as Euphorbia heterophylla, E. hirta, and Tridax procumbens, have potential as sources of useful drugs due to their rich phytochemical constituents, including phlobatannins, cardiac glycosides, steroids, and tannins [26]. It is important to conduct inventories of plants with therapeutic value and document the knowledge related to their use in systematic studies. These studies can have various benefits for society, such as conserving traditional knowledge, identifying plants with market potential that can generate income for local communities, and enhancing confidence and appreciation of herbal medicines among local

communities [27,28] .

The conservation and sustainable use of plant species with potential medicinal and economic value require their identification and documentation [27,28]. This approach not only helps to preserve traditional knowledge but also promotes the appreciation of the value of plant resources among local communities. The identified plant species can be used in the development of traditional medicines to provide significant healthcare to society. Several studies have documented the therapeutic properties of some of the plant species found in the NVRI environment, highlighting the importance of documenting their medicinal properties [10-13]. The documentation of plant species with potential medicinal and economic value is crucial for their conservation and sustainable utilization, as well as for the preservation of traditional knowledge and the promotion of their value among local communities [27,28].

4. Conclusion

The use of traditional medicinal plants is still prevalent in Nigeria, and it is an essential part of primary healthcare. This study aimed to identify the types of medicinal plants present in the National Veterinary Research Institute (NVRI) in Vom Town, Nigeria, and document the knowledge of poisonous plants. The study was divided into four blocks: the Administrative block, the Junior staff quarters block, the Senior staff quarters block, and the National Institute for Trypanosomiasis Research (NITR) environment block, and the plants within these blocks were identified through a field survey using Android phones equipped with Google lens and GPS. The results showed that the Fabaceae family had the highest number of medicinal plants, followed by Euphorbiaceae and Lamiaceae. The importance of these plant families lies in the fact that they contain a high number of medicinal plants, which could potentially be useful for human health. Proper identification of these plants is crucial as misidentification can result in poisoning. This study is not only important for conservation purposes but also for public health and safety. The findings of this study can aid researchers working on medicinal plants found in this environment and contribute to the inventory of medicinal plants in this area for conservation purposes.

Data Availability

The datasets generated and analysed during the current study are not publicly available due to the organization (National Veterinary Research Institute, Vom) did not permit the release of the data.

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