

Pteridophytes of Daman and Adjoining Areas, Makwanpur District, Central Nepal

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(Plant Systematics and Biodiversity)

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RECOMMENDATION

This is to certify that M. Sc. Dissertation work entitled "**Pteridophytes of Daman and Adjoining Areas, Makwanpur District, Central Nepal**" has been carried out by Sanam Prajapati under my supervision. The entire work is based on field study and lab work performed by the student and the same work has not been submitted for any other degree. I recommend this dissertation work to be accepted as a partial fulfillment for Master's Degree of Science in Botany, Tribhuvan University.

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LETTER OF APPROVAL

This dissertation work submitted by Sanam Prajapati entitled "Pteridophytes of Daman and Adjoining Areas, Makwanpur District, Central Nepal" has been accepted as a partial fulfillment of the requirements for Masters of Science in Botany (Plant Systematics and Biodiversity).

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SUMMARY

From the present study, a total of 128 specimens of Pteridophytes belonging to 24 families, 47 genera and 85 species were recorded from Daman and adjoining areas, Makwanpur district. The species are found to occur within the elevational range of 700m to 2500m. Based on the collection and number of species it represents 15.91% of the total Pteridophyte Flora of Nepal. Though the study is mainly focused in Daman, with few visits to the adjoining areas, this effort sums up 35 species as the new records from the Makwanpur district, when compared to the species reported by Phuyal et al. (2011).

Based on the number of species and genera, Polypodiaceae is the largest family followed by Pteridaceae. Among the total 47 genera with 85 species, *Pteris* is the largest genera with six species, followed by, *Selaginella* with five species. Other large genera are *Cheilanthes*, *Dryopteris*, *Huperzia*, *Lepisorus*, *Pichisermollia* with four species each.

Three different habitats were identified from the present study. On the basis of habitat, out of 85 species of pteridophytes 42 species (37%) were found in terrestrial habitat, 46 species (41%) as lithophytes and 25 species (22%) as epiphytes. Apart from these three distinct habitats there are some species which are found in more than one habitat. Only one species *Nephrolepis auriculata* occurred in terrestrial habitat as well as an epiphyte and lithophyte, while there are species which are found both as lithophytes or terrestrial, or some species as epiphytes or lithophytes.

Six distinct forest types have been distinguished, among which mixed forest is much more diversified than any other forest type. Species richness is highest at the altitudinal range of 2200m to 2400m. Terrestrial habitat holds more number of pteridophytes and epiphytes are few in numbers.

Thirty species of economically important pteridophytes were recorded. Among them five species of pteridophytes were used as food and two species were used as fodder, twelve species of pteridophytes had medicinal value and three species of pteridophytes had ornamental value. *Pteridium revolutum*, *Pteris wallichiana*, *Nephrolepis auriculata* and *Gleichenia gigantea* are preferred to plant for preventing landslides. While Rhizome of *Drynaria mollis* and *Oleandra wallichii* is another major source of income for local people as huge amount of rhizome of these two species is exploited from the community forest and exported to different places.

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ACRONYMS AND ABBREVIATIONS

<i>auct. non</i>	-	auctorum <i>non</i> (misapplication of a name)
Aug	-	August
C	-	Central Nepal
CDB	-	Central Department of Botany
comb. nov.	-	combinatio nova (taxon has recently been transferred to a new rank)
DFO	-	District Forest Office
DHM	-	Department of Hydrology and Meterology
diam.	-	diameter
E	-	Eastern Nepal
<i>et al.</i>	-	and others
ex	-	validly published by
Fig.	-	Figure
<i>gen. nov.</i>	-	<i>genus novum</i> (new genus name)
In	-	In the publication of
IVI	-	Important Value Index
KATH	-	National Herbarium and Plant Laboratories, Godavari
m	-	metre
mm	-	millimetre
<i>nom. nov.</i>	-	<i>nomen novum</i> (a new name)
<i>nom. nud.</i>	-	<i>nomen nudum</i> (published without description, making the name invalid)
<i>non</i>	-	not
Nov	-	November
Sep	-	September
Sp.	-	Species (singular)
<i>sp. nov.</i>	-	<i>species nova</i> (species is new to science)
subsp.	-	Subspecies
TUCH	-	Tribhuvan University Central Herbarium
var.	-	Varieties
viz.	-	namely
W	-	Western Nepal