TERRESTRIAL GASTROPOD FAUNA IN SHIVAPURI NAGARJUN NATIONAL PARK, KATHMANDU

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INSTITUTE OF SCIENCE AND TECHNOLOGY

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RECOMMENDATION

This is to recommend that the dissertation entitled " Terrestrial Gastropod Fauna in Shivapuri Nagarjun National Park, Kathmandu" has been carried out by Miss Srijana Khanal for the partial fulfilment of M.Sc. degree in Zoology (Entomology). This original work was conducted under my supervision. To the best of my knowledge, this dissertation work has not been submitted for any other degree.

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LETTER OF APPROVAL

On the recommendation of supervisor, Mr. Prem Bahadur Budha, this thesis submitted by Miss Srijana Khanal entitled " Terrestrial Gastropod Fauna in Shivapuri Nagarjun National Park, Kathmandu" is approved for examination and submitted to the Tribhuvan University in partial fulfilment of the requirements for Master's Degree of Science in Zoology with special paper Entomology

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This dissertation work submitted by Miss Srijana Khanal entitled “Terrestrial Gastropod Fauna in Shivapuri Nagarjun National Park, Kathmandu” has been approved as a partial fulfilment of the requirements for the Master's Degree of Science in Zoology with special paper (Entomology)

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DECLARATION

I hereby declare that the work presented in this thesis has been done by myself and has not been submitted elsewhere for the award of any degree. All sources of information have been specifically acknowledged by reference to the author(s) or institution(s).

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ABSTRACT

A total of 1140 specimens representing 12 families, 20 genera and 39 species were reported from Nagarjun forest within altitudinal range 1300 to 1960 m above sea level. Family Ariophantidae was the most dominant family containing 10 species following Cyclophoridae (9), Heliocarionidae (6), Glessulidae (3), Diplommatinidae (3), Camaeinidae (2), Pyramidulidae (1), Clausiliidae (1), Subulinidae (1), Plectopylidae (1), Euconulidae (1) and Bradybaenidae (1).

The numbers of specimens per 100 m² plot were ranges from 5 to 143 per whereas the species diversity in each plot ranges from 3 to 15 species. Shannon index of species diversity was calculated (H= 1.087) indicating high species diversity. Among the collected specimens *Alycaeus burti* was the most abundant (Pi = 0.147) and *Alycaeus* cf *inflatus*, *Cyclophorus* sp., *Pyramidula humilis*, *Macrochlamys* sp.C, and *Bradybaena radicicola* were the least abundant and found as singleton in Nagarjun forest (pi=0.00076). Species density was ranged from 0.18 to 28.03 per 100 m². The species diversity of terrestrial snails with altitude was negatively correlated (r = -0.10) but positively correlated with soil pH (r = 0.33).

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ABBREVIATION

CDR	- Central Development Region
DFO	- District Forest Office
DNPWC	- Department of National Park and Wildlife Conservation
EDR	- Eastern Development Region
FWDR	- Far -western Development Region
HMG	- His Majesty of Government
IUCN	- International Union for Conservation of Nature and Natural Resources
MWDR	- Mid -Western Development Region
NP	- National Park
sp.	- species
spp.	- species (plural of species)
WDR	- Western Development Region