



BHUTAN BIODIVERSITY PORTAL

www.biodiversity.bt

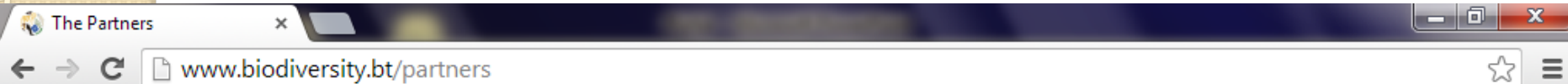
Background

- Bhutan: high levels of biodiversity
- Lack of easy access to information
- Difficult for one single agency/org. to study and document
- → Bhutan Biodiversity Portal
launched on 17th Dec, 2013

Why a portal?

- Consortium-based approach to documenting and managing biodiversity information
- Citizen science: collective effort by community members, allows for collection of large quantities of data
- Promotes awareness and appreciation of the local natural environment
- Open-source technology (with technical support from India Biodiversity Portal)

Partners



The Partners

Currently, the following national agencies are the founding members of this consortium-based initiative, with the National Biodiversity Centre as the Secretariat to the consortium. However, as we progress, we foresee and welcome involvement of many more partners to this initiative and the consortium, both national and international.



National Biodiversity Centre



Information and Communication Services, Ministry of Agriculture and Forests



College of Natural Resources, Royal University of Bhutan, Lobeysa



Department of Forests and Parks Services represented by:



Ugyen Wangchuck Institute of Conservation and Environment



Nature Conservation Division



WWF-Bhutan

- [The Portal](#)
- [Biodiversity of Bhutan](#)
- [Technology](#)
- [Partners](#)
- [Donors](#)
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Donors

Donors

Donors

The development of this portal up to this stage has been facilitated through funding support from the following donor agencies:



Royal Government of Bhutan



DANIDA (through funding support to Bhutan Climate Change Summit 2011)



European Union (through RNR-EU-Sector Support project).



The World Bank (through Aquatic Biodiversity project)



The Team



Dr. Tashi Yangzome Dorji
Program Director
National Biodiversity Center
Ministry of Agriculture and Forests



Mr. Kinley Tshering
Developer
Information and Communication Services
Ministry of Agriculture and Forests



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Species data curator
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Royal University of Bhutan



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Species data curator
Ugyen Wangchuk Institute of Conservation and Environment
Ministry of Agriculture and Forests



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National Biodiversity Center
Ministry of Agriculture and Forests



Mrs. Sangay Dema
Content manager/Data Curator
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Ministry of Agriculture and Forests



Mr. Nawang Gyeltshen
Species data curator
Wildlife Conservation Division
Ministry of Agriculture and Forests



Ms. Rinchen Yangzom
Species data curator
National Biodiversity Center
Ministry of Agriculture and Forests



























Mr. Tshering Dorji
Map data curator
National Biodiversity Center
Ministry of Agriculture and Forests



Ms. Kezang Wangmo
Co-content manager
National Biodiversity Center
Ministry of Agriculture and Forests

Participants / Users

Activity ▾ 1679 users found


| | | | | | |
|---|---|--|---|---|---|
|  |  |  |  |  |  |
| Phuentsho | Tandin wangchuk | Sangay Dema | Phuntsho Wangdi | BBP Admin | Choki Gyeltshen |
|  |  |  |  |  |  |
| Phub Gyeltshen | Sonam Rinzin | Jatishwor Singh I... | Kado Rinchen | Seangyeal Chho... | Gyem Lhamo |
|  |  |  |  |  |  |
| Tashi | Dhan Bdr Gurung | Dorji Duba | Dechen Norbu | Tashi | Tshulthrim Drukpa... |
|  |  |  |  |  |  |

User profile

Sangay Dema

[About Me](#)[Content](#)[Groups](#)[Contact Me](#)

Activity Score

50 Content Score 20 Curation Score 30

Observations



| Category | Count |
|------------|-------|
| Uploaded | 67 |
| Identified | 297 |
| Organized | 40 |
| Downloads | 21 |
| Comments | 566 |

Species



Documents








Discussions



Maps

Groups

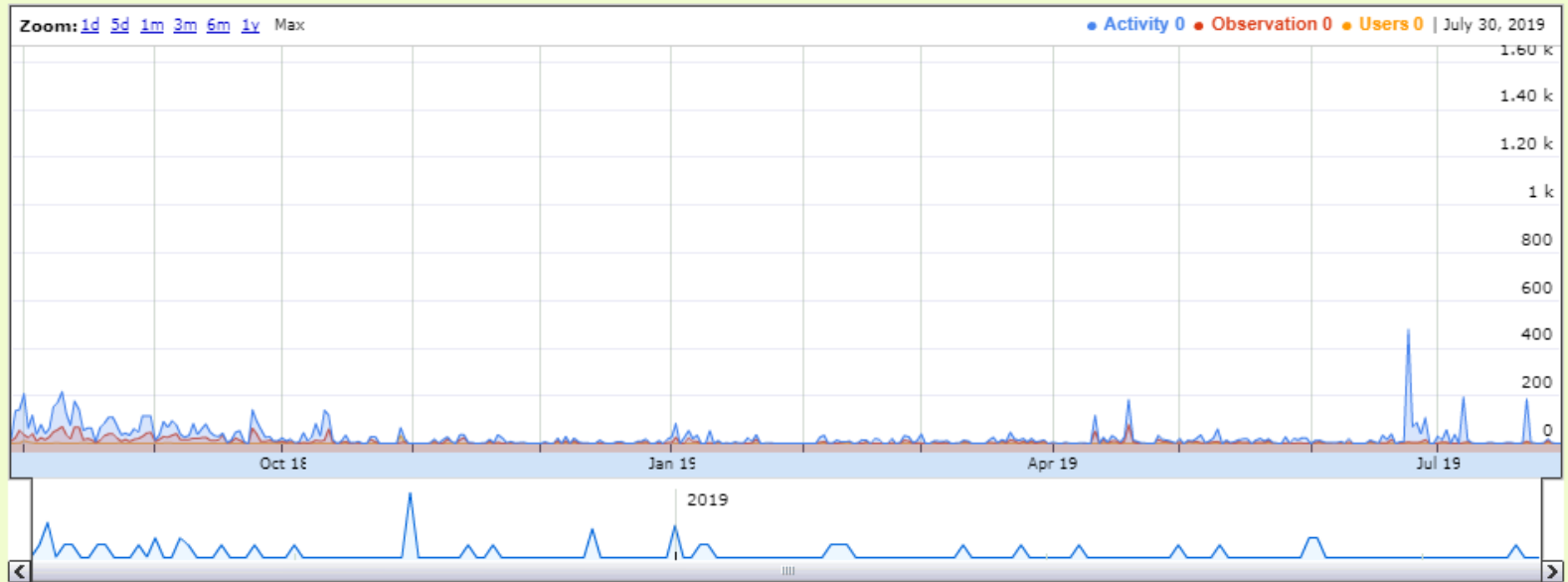
 Username Sangay Dema Full Name Sangay Dema Sex Female Occupation Government Institution Government Location Bhutan Member since Oct 15, 2013 12:23:03 PM Last visited Mar 29, 2019 3:21:48 PM Website www.nbc.gov.bt, www.biodiversity.btInterested in Species
Groups & Habitats About Me

Hello, I am Sangay from National Biodiversity Centre, Ministry of Agriculture and Forests, Serbithang. I am a plant taxonomist, though i hardly practice!! Therefore, i am hoping that this portal will help me revive my taxonomic skill!!! By the way, though i have clicked my interest group in alpine plants, i love all forms of biodiversity, it is just that

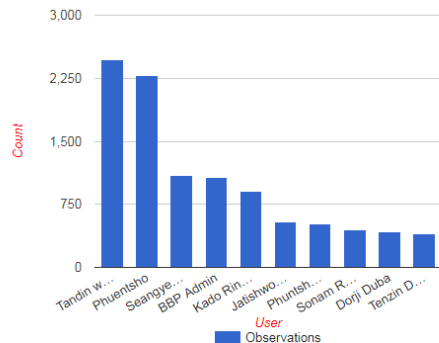
Observations

Participants' Dashboard

Activity Monitor

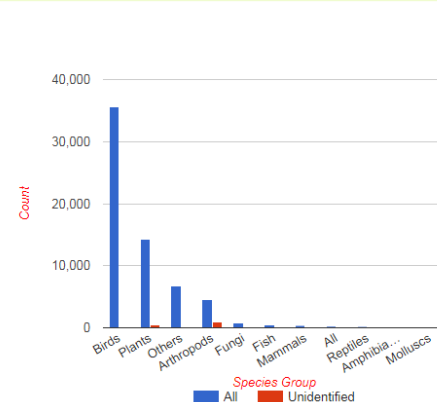


User Stats : 17,686 Observations and top 10 Contributors of last 7 days



| | User | Observations |
|--|--------------------------|--------------|
| | Tandin wangchuk | 2466 |
| | Phuentsho | 2285 |
| | Seangyeal Chhopheal | 1100 |
| | BBP Admin | 1071 |
| | Kado Rinchen | 906 |
| | Jatishwor Singh Irungbam | 539 |
| | Phuntsho Wangdi | 515 |
| | Sonam Rinzin | 443 |
| | Dorji Duba | 418 |
| | Tenzin DENDUP | 401 |

Observations



| | Species Group | All | Unidentified |
|--|---------------|-------|--------------|
| | Birds | 35587 | 31 |
| | Plants | 14320 | 443 |
| | Others | 6749 | 26 |
| | Arthropods | 4496 | 918 |
| | Fungi | 834 | 81 |
| | Fish | 395 | 14 |
| | Mammals | 379 | 22 |
| | All | 229 | 16 |
| | Reptiles | 170 | 24 |
| | Amphibians | 92 | 22 |
| | Molluscs | 39 | 21 |

Species Pages

Browse Species

Gallery

Contribute

A-Z A B C D E F G H I J K L M N O P Q R S T U V W X Y Z



all ▾

Last Updated ▾

Q 4489 species pages and 2879 species stubs are found



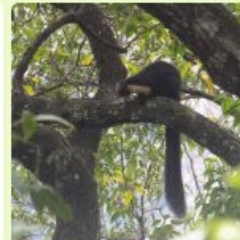
Oriolus traillii
(Vigors, 1832)



Carduelis spinoides
Vigors, 1831



Corvus corax
Linnaeus, 1758



Rattus bicolor
(Sparrman, 1778)



Pericrocotus flammeus (J. R.)



Psilopogon lineatus



Buceros bicornis
Linnaeus, 1758



Eumyias thalassinus



Megalaima virens
(Bedford, 1793)



Emberiza lathami
Gray, 1821



Halenia elliptica D.
Don



Androsace hemisphaerica

Taxon Browser

BBP Taxonomy Hierarchy ▾

Loading ...

Search for taxon

<

>

Search

Taxonomic Summary

| | |
|---------------|------|
| Species | 7230 |
| Infraspecies | 133 |
| Accepted Name | 6651 |
| Synonym | 0 |

Rhododendron keysii Nutt. Accepted Name

[Plantae](#) > [Tracheophyta](#) > [Magnoliopsida](#) > [Ericales](#) > [Ericaceae](#) > [Rhododendron](#) > *Rhododendron keysii* Nutt.



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Images



1/2



Rhododendron keysii

Contributors

1. Nima Gyeltshen, NBC

[View Image source](#)

(cc) BY



(0 rating)



Classifications

BBP Taxonomy Hierarchy [admin]

- Plantae
 - Tracheophyta
 - Magnoliopsida
 - Ericales
 - Ericaceae
 - Rhododendron
 - Rhododendron keysii* Nutt.

Search for taxon



Search

Synonyms

| | |
|---------|--|
| Synonym | <i>Azalea keysii</i> (Nutt.) Kuntze |
| Synonym | <i>Rhododendron keysii</i> var. <i>unicolor</i> Hutchinson |
| 0 | |

Overview

Diagnostic

Description

Habit

Shrub

Family Description

Trees, shrubs, or subshrubs, often evergreen, sometimes epiphytic. Leaves alternate, sometimes becoming aggregate into pseudo-whorls, simple, pinnately veined, exstipulate. Flowers in racemes, corymbs, panicles, clusters or solitary, actinomorphic or zygomorphic, bisexual. Calyx of 5(-8)sepals, free and borne on ovary, or united into tube at base. Corolla of 5(-10)petals united at base or almost to apex, tubular, barrel-shaped, urn-shaped, campanulate, funnel-shaped or salver-shaped. Ovary inferior or superior, 4-5(-20)-celled; style cylindric; stigmasimple; ovules numerous, axile. Fruit a berry or 5(-20)-valved capsule, sometimes enclosed by enlarged fleshy calyx. . Members of the Ericaceae are of great horticultural importance in North temperate countries, particularly in Europe and north America where many genera are prized as ornamentals, including Rhododendron (by far the most important), Enkianthus, Pieris, Gaultheria, Vaccinium and Agapetes. Bhutan is particularly rich in Ericaceae, and there exists some economic potential for commercial production to the rare species. . The family is treated here in a broad sense, including those genera sometimes placed separately in Vacciniaceae.

Genus Description

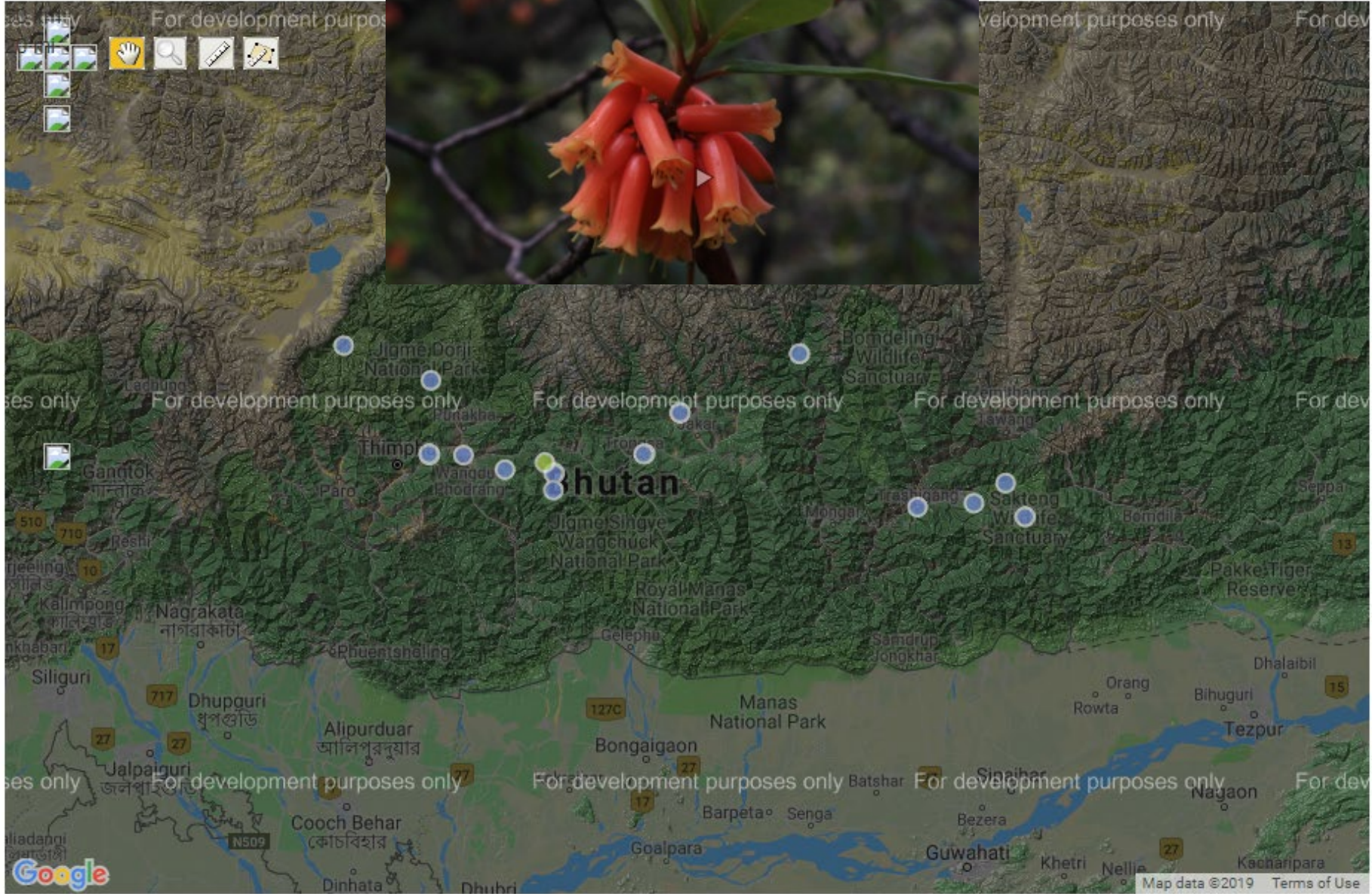
Evergreen shrubs or trees, often aromatic;indumentum of simple or compound hairs or peltate scales. Leaves alternate or clustered at branch ends, coriaceous,entire. Flowers interterminal condensed racemoes, rarely solitary, weakly zygomorphic. Calyx 5(-8)-lobed, often reduced to shallow cup. Corolla campanulate, funnel-shaped or salver-shaped, rarely cylindric, with5-10 long or short lobes. stemans (5-)10(-18). Ovary 5-20-celled;stigma capitate. Capsule 4-20-valved.

Species description

Shrub 1.5-6m; shoots densely scaly. Leaves elliptic, 6-9x2-3cm, acute, subacute or rounded and finely mucronate, base rounded or cuneate, densely scaly beneath, sparsely scaly above; petioles 7-11mm. Racemes axillary, often several close together, each 2-5-flowered, flowers pendulous; pedicels slender, 5-8mm, 2.5cm, orange-red or crimson, becoming paler towards 5 short, weakly spreading, yellowish or greenish lobes. Stamens 10; filaments pubesceny in lower half. Ovary scaly. Capsules cylindric, c 1cm.

Occurrence

Occurrence Records




Nagrakata

Selected layers

Selected features

Showing *new* layers



 add to map

Important bird areas of
Bhutan_Birdlife International



Important bird
areas of
Bhutan_Birdlife
International

 details  link

 zoom to extent  remove from
map

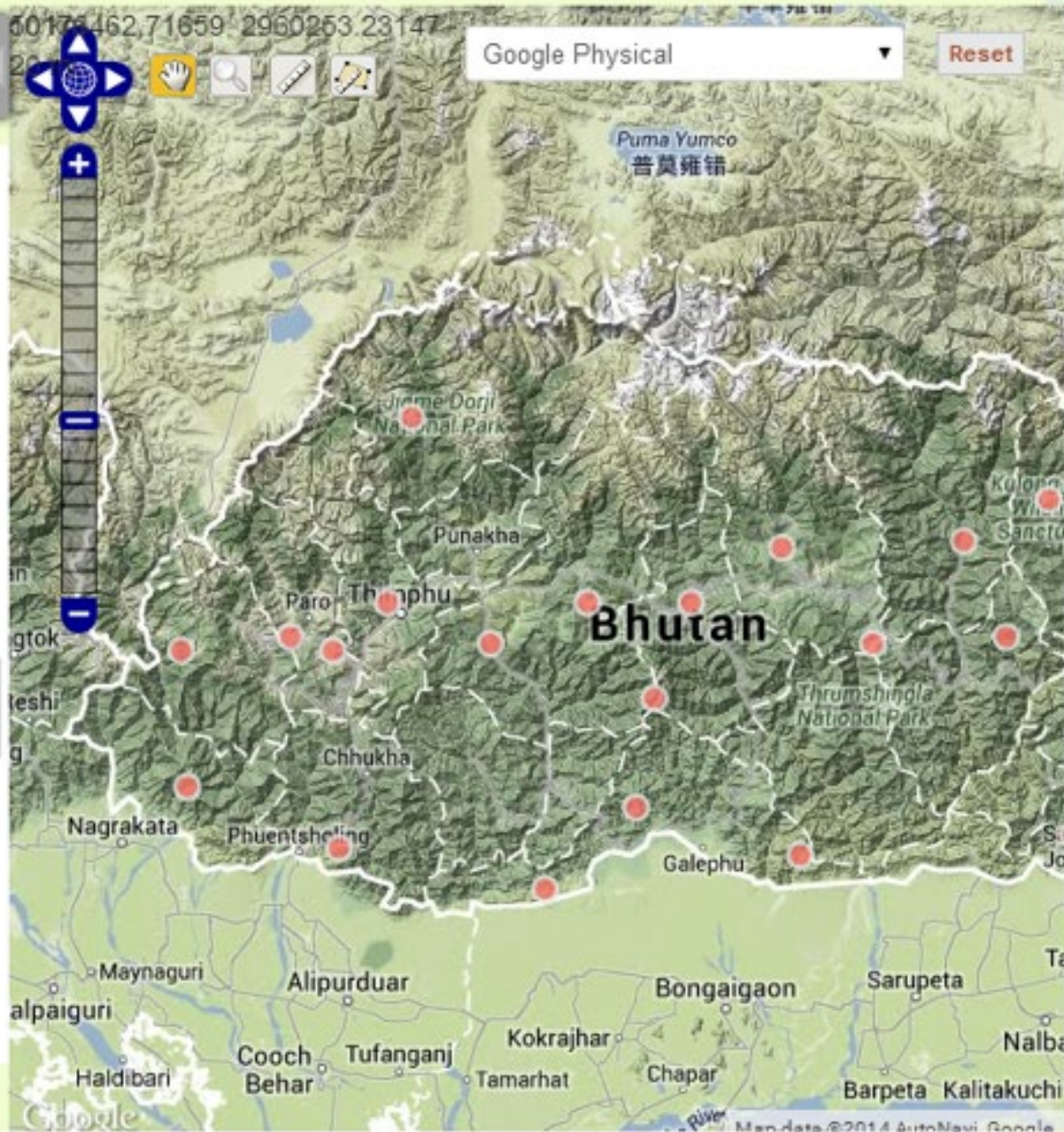
Hydro-meteorology Monitoring
Stations



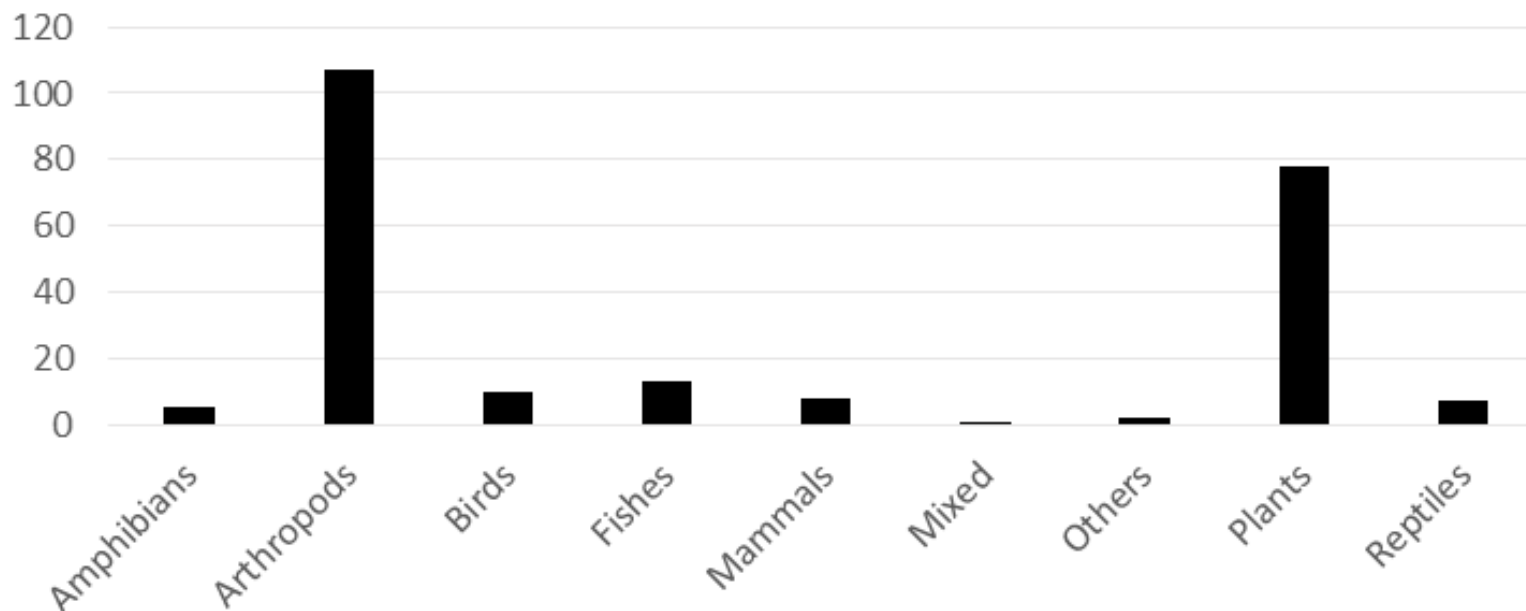
Hydro-
meteorology
Monitoring Stations

 details  link

 add to map



Count of Taxon



Taxon ▼

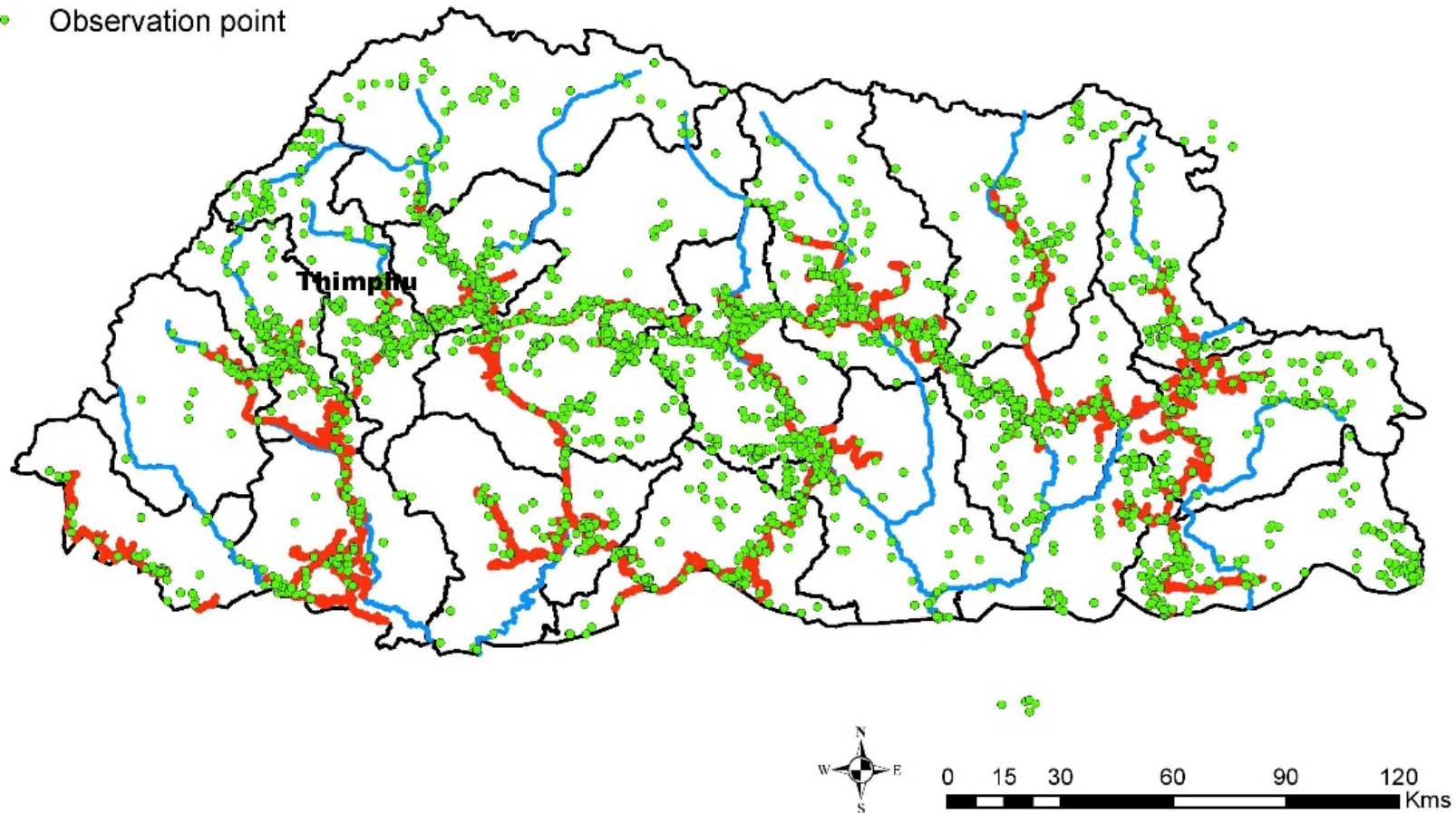
➤ Fish data

- Fishes of Bhutan
- Fishes of Western Bhutan
- Freshwater Fish of Royal Manas National Park
- An annotated checklist of fishes from Bhutan
- Preliminary Feasibility Study Fisheries development in Chukha and Tala Hydropower (EIA)
- Fish Assessment in Kurichhu hydropower plant (EIA)
- Aquatic biodiversity assessment Kurichhu - UWICER


Observation points uploaded onto the Portal (to date)

Legend

- Major roads
- Major rivers
- Observation point



NEW DATA FEATURES













Attribution

Ugyen Wangchuck Institute for Conservation and Environmental Research, Department of Forest and Parks Services.

Taxonomic Coverage

Group *

Temporal Coverage

Date Accuracy ☐ Accurate ☒ Approximate ☐ Unknown

Observed* 01/01/2013

31/12/2015

Geographical Coverage

Location Scale* ☐ Local ☐ Region ☐ Country

Observed At * Mangdechhu Hydroelectric Project Trongsa, Bhutan

Last used location

➤ Traits

- IUCN status
- Life form
- Fish Length
- Fish reproductive condition
- Custom...

➤ Data Package

- Datasets
- Data Tables



New version of the portal has been deployed, some features are still under development and may not work temporarily.

Dataset

22 datasets found

Last Updated

Aquatic Biodiversity

Dataset

No of DataTables

Observed

Submitted

Updated

Attribution

Summary

Description

Mangdichhu Aquatic Biodiversity

23

January 1, 2013 - December 31, 2015 (Approximate)

January 31, 2018

January 31, 2018

Ugyen Wangchuck Institute for Conservation and Environmental Research, Department of Forest and Parks Services.

Data represents the aquatic (insect) biodiversity of Mangdichhu, generated by Ugyen Wangchuck Institute for Conservation and Environmental Research (UWICER), Bumthang.

Data has been contributed by aquatic biodiversity research team from Ugyen Wangchuck Institute for Conservation and Environmental Research.

Dataset

No of DataTables

Observed

Submitted

Updated

New records of *Epiophlebia laidlawi* Tillyard in Bhutan, with notes on its biology, ecology, distribution, zoogeography and threat status (Anisozygoptera: Epiophlebiidae)

1

January 1, 1970 (Unknown)

January 29, 2018

January 29, 2018

Dataset : Mangdichhu Aquatic Biodiversity

| | |
|------------------|---|
| No of DataTables | 23 |
| Observed | January 1, 2013 - December 31, 2015 (Approximate) |
| Submitted | January 31, 2018 |
| Updated | January 31, 2018 |
| Attribution | Ugyen Wangchuck Institute for Conservation and Environmental Research, Department of Forest and Parks Services. |
| Summary | Data represents the aquatic (insect) biodiversity of Mangdichhu, generated by Ugyen Wangchuck Institute for Conservation and Environmental Research (UWICER), Bumthang. |
| Description | Data has been contributed by aquatic biodiversity research team from Ugyen Wangchuck Institute for Conservation and Environmental Research. |

Data Table : [Mangdichhu XIV \(Phase II\) Aquatic Biodiversity \(15 Observations\)](#)

Data Table : [Mangdichhu XIII \(Phase II\) Aquatic Biodiversity \(12 Observations\)](#)

Data Table : [Mangdichhu XII \(Phase II\) Aquatic Biodiversity \(16 Observations\)](#)

Data Table : [Mangdichhu XI \(Phase II\) Aquatic Biodiversity \(12 Observations\)](#)

Data Table : [Mangdichhu X \(Phase II\) Aquatic Biodiversity \(19 Observations\)](#)

Data Table : [Mangdichhu IX \(Phase II\) Aquatic Biodiversity \(12 Observations\)](#)

Data Table : [Mangdichhu VIII \(Phase II\) Aquatic Biodiversity \(15 Observations\)](#)

Data Table : [Mangdichhu VII \(Phase II\) Aquatic Biodiversity \(14 Observations\)](#)

Data Table : [Mangdichhu VI \(Phase II\) Aquatic Biodiversity \(11 Observations\)](#)

Mangdichhu XIV (Phase II) Aquatic Biodiversity

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Prev

List

Next

| Title | order | family | sub family | genus | pool | rifle | counts | pi | lnpi | pi(lnpi) | media |
|--------------|---------------|----------------|--------------|--------------|------|-------|--------------|---------------|---------------|----------|-------|
| Heptagenia | Ephemeroptera | Heptageniidae | | Heptagenia | 1 | 1 | 0.027027027 | -3.6109179126 | -0.097592376 | | |
| Baetis | Ephemeroptera | Baetidae | | Baetis | 3 | 3 | 0.0810810811 | -2.512305624 | -0.203700456 | | |
| Centroptilum | Ephemeroptera | Baetidae | | Centroptilum | 3 | 3 | 0.0810810811 | -2.512305624 | -0.203700456 | | |
| Baetis | Ephemeroptera | Baetidae | | Baetis | 1 | 1 | 0.027027027 | -3.6109179126 | -0.097592376 | | |
| Ephemerella | Ephemeroptera | Ephemerellidae | | Ephemerella | 5 | 5 | 0.1351351351 | -2.0014800002 | -0.2704702703 | | |
| unknown | Diptera | Chironomidae | Chironominae | Unknown | 8 | 8 | 0.2162162162 | -1.531476371 | -0.3311300262 | | |
| Chironomus | Diptera | Chironomidae | Chironominae | Chironomus | 3 | 3 | 0.0810810811 | -2.512305624 | -0.203700456 | | |
| Pupa??? | Diptera | Chironomidae | | Pupa??? | 4 | 4 | 0.1081081081 | -2.2246235515 | -0.2404998434 | | |
| Antocha | Diptera | Limoniidae | | Antocha | 1 | 1 | 0.027027027 | -3.6109179126 | -0.097592376 | | |
| Claasenia | Plecoptera | Perlidae | Perlinae | Claasenia | 1 | 1 | 0.027027027 | -3.6109179126 | -0.097592376 | | |

Observed January 1, 2015 - December 31, 2015 (Approximate)

Submitted January 31, 2018

Updated January 31, 2018

Dataset Mangdichhu Aquatic Biodiversity

Datatable type Observations

Attribution Ugyen Wangchuck Institute for Conservation and Environmental Research, Department of

Methods Field Survey

Summary Data represents the aquatic (insect) biodiversity of Mangdichhu, generated by Ugyen Wangchuck Institute for Conservation and Environmental Research, Bumthang.

Notes Data collected from Mangdichhu XIV (Phase II) in 2015.

Species Distribution



Location Information

Mangdechhu Hydroelectric Project Trongsa, Bhutan

LOCAL

27.448566,90.373405

Fishes of Western Bhutan

Like Share

Like Share

| Title | species | location | media |
|-----------------------------|-----------------------------|----------------------------------|-------|
| Anguilla bengalensis | Anguilla bengalensis | Sunkosh river, Dagana | |
| Hypophthalmichthys molitrix | Hypophthalmichthys molitrix | Chhimipang, Darla, Sipsu | |
| Aspidoparia jaya | Aspidoparia jaya | Punatsangchhu | |
| Barilius barna | Barilius barna | Punatsangchhu, Amochhu, Wangchhu | |
| Barilius bendelisis | Barilius bendelisis | Punatsangchhu, Amochhu, Wangchhu | |
| Barilius shacra | Barilius shacra | Punatsangchhu | |
| Barilius vagra | Barilius vagra | Punatsangchhu, Amochhu | |
| Raiamas bola | Raiamas bola | Amochhu | |
| Danio assamila | Danio cf. assamila | Punatsangchhu | |
| Danio rerio | Danio rerio | Punatsangchhu, Amochhu | |

Observed June 1, 2014 - January 2, 2017 (Approximate)

Submitted about 11 hours ago

Updated about 11 hours ago

Dataset Fishes of Western Bhutan

Datatable type Observations

Attribution National Research Centre for Riverine and Lake Fisheries (NRCRLF), Department of Livestock, Haa, Bhutan.

Project Fishes of Western Bhutan (National Research Centre for Riverine and Lake Fisheries, Haa.

Summary Documentation of fishes of western Bhutan. An assessment carried out by the National Research Centre for Riverine and Lake Fisheries (NRCRLF), Department of Livestock (DoL), Haa.

Notes An assessment carried out by the National Research Centre for Riverine and Lake Fisheries (NRCRLF), Department of Livestock (DoL), Haa.

Mode of observation Scientific survey

Documents

[+ Add Document](#)

Browse Documents

Q 173 documents found



Title Biodiversity Statistics of Bhutan 2017
Type Book
Description Bhutan is known to the outside world as a country with rich bio...
Attribution Choki Gyeltshen, Sangay Dema, Danielle Northey & Karunya ...



Choki Gyeltshen



Title Sighting of Arunachal Macaque *Macaca munzala* Sinha et al., ...
Type Journal Article
Description Including the sighting of *Macaca munzala*, SWS is home to 38 ...
Attribution Sonam Tobgay, Kumbu Dorji & Norbu Yangdon



Choki Gyeltshen



Title *Sisyrinchium rosulatum* E.P.Bicknell (Iridaceae): new record of ...
Type Journal Article



Phub Gyeltshen



Title An Updated Checklist of Butterflies (Lepidoptera: Rhopalocera) ...
Type Journal Article
Description The study was carried out at Tsirang District at Southern Bhuta...

Taxon Browser

BBP Taxonomy Hierarchy

Animalia
Arthropoda
Chordata
Cnidaria
Echinodermata
Mollusca
Bacteria
Cyanobacteria
Proteobacteria
Chromista
Fungi
Ascomycota
Basidiomycota

Search for taxon



Search

All Document Tags

#freshwater #herpetofauna agrobiodiversity
amphibians aquatic aquatic biodiversity
aquaticbiodiversity **bhutan**
biodiversity statistics bryophytes
butterflies **butterfly** checklist clanis
conservation crambidae damselflies diversity
dragon fly dragonflies **fish freshwater**
fungi herpetofauna hyperion invertebrates
jswnp langurs lasiocampidae **lepidoptera**

Data sharing and Licenses

- Creative commons licensing systems

www.creativecommons.org

- CC- BY
- CC- NC
- CC-ND
- CC-SA
- Not anti-copy right/anti-intellectual rights/anti-commercialism
- Way of getting information across with flexible distribution rules
- Reserves moral, intellectual and distribution rights
- Philosophy: “Some rights reserved” rather than “All rights reserved”

Potential beneficiaries and uses of the portal data

- **ALL!!**
 - Policy makers
 - Biodiversity managers
 - Land-use planners
 - Environmentalists
 - Researchers / students
 - General public / biodiversity enthusiasts (national and international)
 - Tourism sector



Future Portal Activities

- ✓ Integrate specimen voucher data such as specimen data on bees, dragonflies, snails, herbariums, etc.
- ✓ Enhanced map modules (with provisions for gazetteer)
- ✓ Develop detailed manuals (print)
- ✓ Encourage curators to involve actively by providing incentives such as recognitions, capacity development on upgraded portal features, etc.
- ✓ Identify additional curators (national or international) for certain taxonomic groups.
- ✓ Create awareness to wider audiences such as university student and lecturers, field foresters, tourism industry, hydro-power sectors, etc.
- ✓ Encourage/assist in sharing data for benefit of all.
- ✓ Upload data frequently for lesser known taxonomic groups

App for iOS and Android available!



www.facebook.com/bhutanbiodiversityportal

TASHI DELEK!