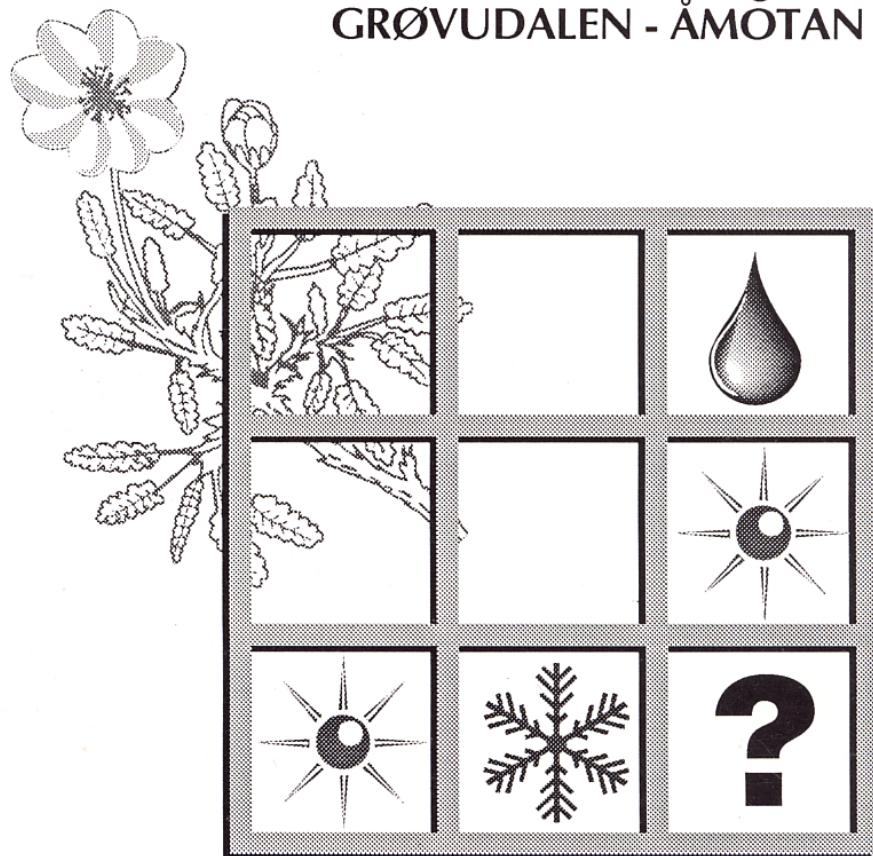


ARCTIC GLOBAL CHANGE CONFERENCE
Oppdal, Norway 21 - 26 August 1993

**Global Change and
Arctic Terrestrial
Ecosystems:**

an International Conference
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**Excursion guide:
GRØVUDALEN - ÅMOTAN**



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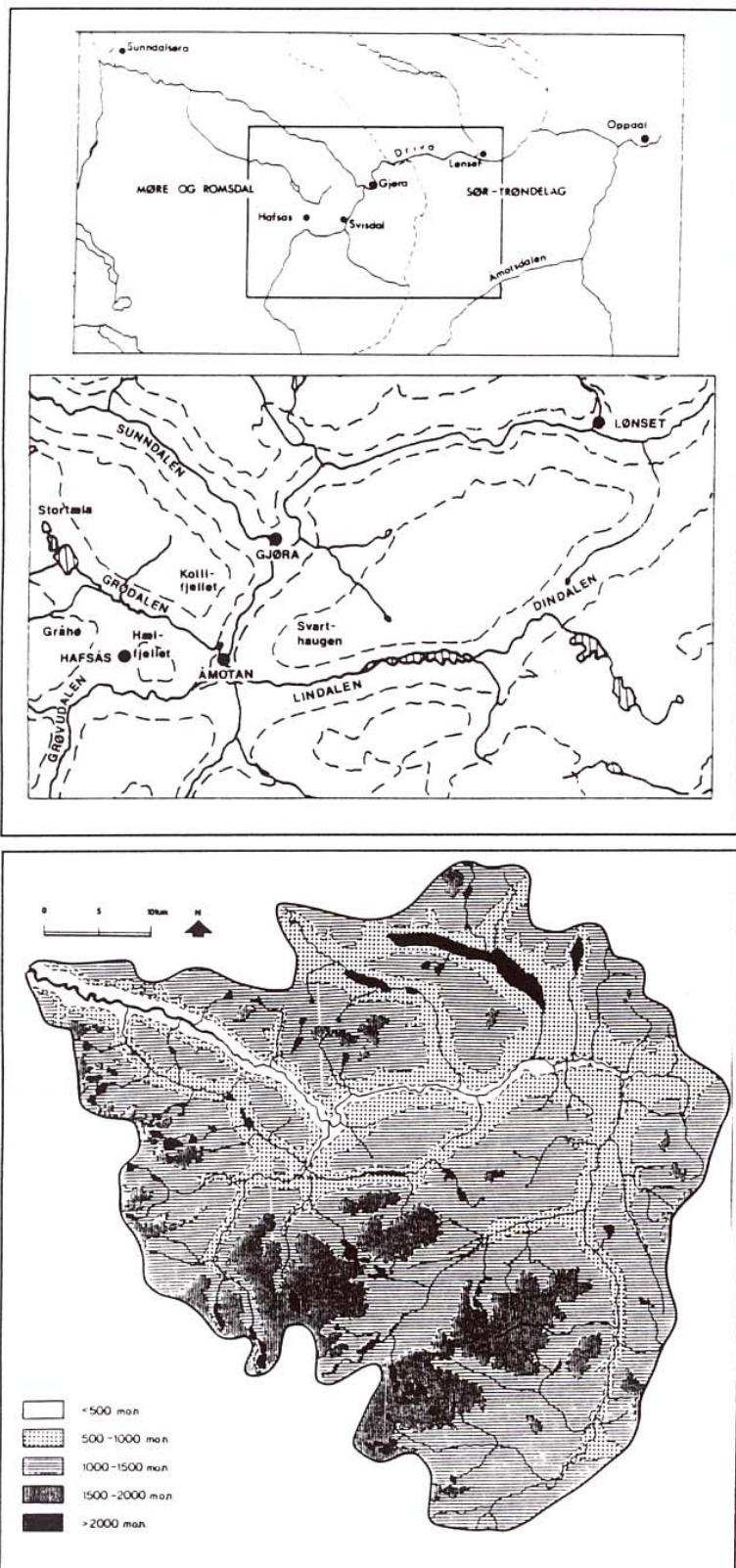
Excursion guide:

GRØVUDALEN - ÅMOTAN

Author:

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GENERAL INFORMATION



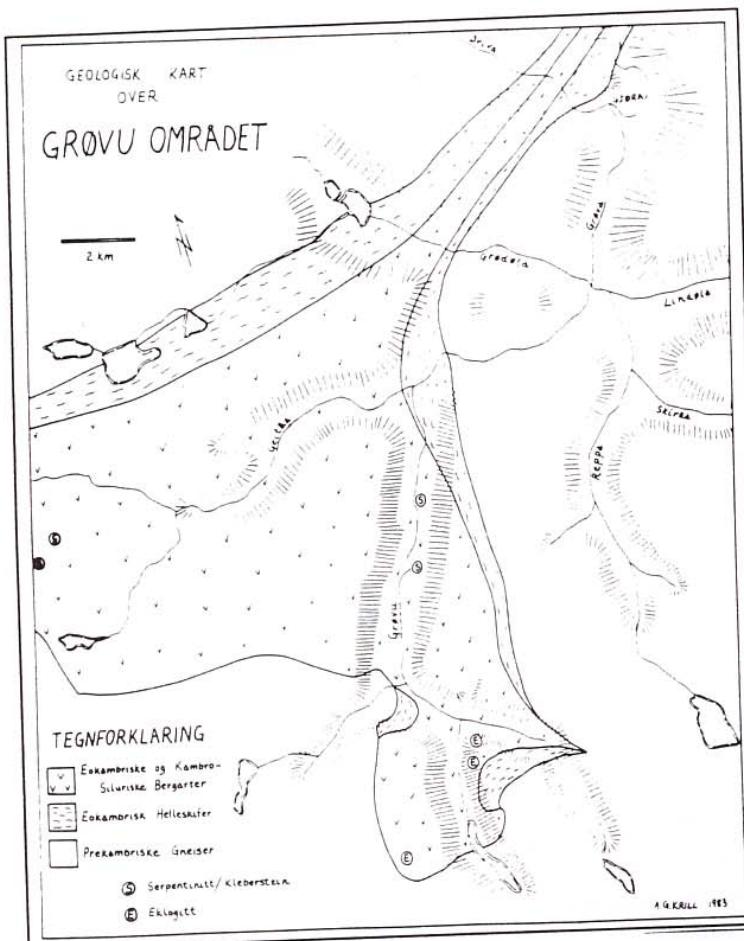
On this excursion we shall be meeting the River Grøvu and the central part of its catchment area (482 km^2). The landscape is dominated by mountains and valleys formed by glaciers. Six valleys form a star-like river system. 75 % of the area is above 1000 m, and the highest mountain is Storskrymten (1985 m).



To the left you can see the altitudinal zones of the entire catchment area of the River Driva, which includes its tributary, the Grøvu. If temperatures rise, the areas suitable for specialized mountain plants will decrease in size and gradually become more fragmented and scattered. In the table below, the areas of the altitudinal zones are given as percentages of the total area of the river system (Driva) and its tributary, the Grøvu.

Zone	Driva	Grøvu
< 500m	5 %	4 %
500-1000m	25 %	22 %
1000-1500m	56 %	51 %
1500-2000m	15 %	24 %
>2000m	0,2 %	-

GEOLOGY AND NATURAL HISTORY



The bedrock in the Grøvu area consists of calcareous Cambro-Silurian rocks, Eocambrian flagstones and Precambrian gneisses. In Western Norway, gneisses are the most common types of rock. The occurrence of the high-grade metamorphic rock, eclogite, is one of the most interesting features for geologists. The calcareous rocks produce rich soil and a great diversity in the mountain plants in the valleys of Grøvudalen, Geitådalen and Reppdal. There are minor differences between the flora of Grøvu and Dovre.

The broad features of the landscape were established during the Tertiary Period (65 - 2.5 million years ago) though erosion triggered by uplift and tilting of the Scandinavian landmass. The ensuing Quaternary glaciations caused

erosion and deposition that significantly modified this landscape. Valleys were substantially deepened, resulting in fjords forming where they were gouged out beneath sea level. Most mountains were steepened, and many hills rounded off. Vast quantities of material eroded by the glaciers and by frost action were transported by glaciers meltwater rivers to be deposited as moraines, eskers, terraces, outwash plains, etc. Many examples of such deposited landforms can be seen in the Grøvu area. Near the Åmotan canyon there are several gravel terraces at 765 m above sea level, which were formed as deltas in a lake dammed by the Sunndal glacier.

CLIMATE

The climate in this area is intermediate between the mild winters (up to +2°C average in January) and high precipitation (up to > 2000 mm per year) on the coast and the cold winters and dry climate (e.g. Hjerkinn, Dovre 220 mm per year) of the inner parts of the country. The average annual precipitation in the excursion area is estimated to be 700 mm per year. Temperatures decrease upwards by 0.6 °C per 100 m on average, giving a difference from the lowest to the highest point of the planned trip of about 7-8 °C, and a maximum difference in the area of about 12 °C.

VEGETATION AND VASCULAR PLANTS

The vegetation cover shows an enormous variation within the Grøvu area. We find southern boreal forests with Wych Elm (*Ulmus glabra*) in warm, sunny places in the Åmotan canyon. Up to about 800 m, there are Scots Pine (*Pinus sylvestris*) dominated boreal forests. From 800 m up to about 1000-1100 m, Downy Birch (*Betula pubescens*) is the dominating tree of the North Boreal (Subalpine) Zone. Above this altitude, is first the Low Alpine Subzone with shrubs such as Dwarf Birch (*Betula nana*) and Willow (*Salix spp.*) up to 1300-1400 m, followed by the Middle Alpine Subzone at 1400-1700 m above sea level which is characterised by the absence of woody plants and dominated by low herbs and grasses. The vegetation gradually becomes more fragmented by rocks and stones. The High Alpine Subzone, above 1600-1700 m, only has patches of vegetation between the rocks, stones, snowpatches and glaciers.

About 434 taxa of vascular plants have been recorded in the catchment area of the river Grøvu. This is a meeting point of costal and eastern plants, and of southern and alpine elements. In relatively small areas, such as the Åmotan canyon, an amazingly great diversity can be found. The calcareous soil in parts of the area significantly increases the plant diversity. In the Grøvu valley alone about 330 species of vascular plants have been recorded above 800 m.

<i>Achillea millefolium</i>	Yarrow, Milfoil	<i>Avenula pratensis</i>	Meadow Oat
<i>Aconitum septentrionale</i>	(Monkshood)	<i>Avenula pubescens</i>	Hairy Oat
<i>Actaea spicata</i>	Baneberry, Herb Christopher	<i>Bartsia alpina</i>	Alpine Bartsia
<i>Agrostis canina</i>	Velvet Bent	<i>Betula nana</i>	Dwarf Birch
<i>Agrostis capillaris</i>	Common Bent-grass	<i>Betula pendula</i>	Silver Birch
<i>Agrostis mertensii</i>		<i>Betula pubescens</i>	(Downy) Birch
<i>Ajuga pyramidalis</i>	Pyramidal Bugle	<i>Bistorta vivipara</i>	Alpine Bistort, Viviparous Knotweed
<i>Alchemilla alpina</i>	Alpine Lady's Mantle	<i>Botrychium boreale</i>	
<i>Alchemilla glomerulans</i>		<i>Botrychium lunaria</i>	Moonwort
<i>Alnus incana</i>	Grey Alder	<i>Calamagrostis epigeios</i>	Wood Small-reed
<i>Alopecurus geniculatus</i>	Marsh Foxtail	<i>Calamagrostis purpurea</i>	Scandinavian Small-reed
<i>Andromeda polifolia</i>	Bog Rosemary, Marsh	<i>Calamagrostis stricta</i>	Narrow Small-reed
<i>Anemone nemorosa</i>	Rosemary	<i>Calluna vulgaris</i>	Ling, Heather
<i>Angelica archangelica</i>	Wood Anemone	<i>Caltha palustris</i>	Kingcup, Marsh Marigold
<i>Angelica sylvestris</i>	Garden Angelica	<i>Campanula latifolia</i>	Large Campanula
<i>Antennaria alpina</i>	Wild Angelica	<i>Campanula rotundifolia</i>	Harebell, Bluebell
<i>Antennaria dioica</i>	Mountain Everlasting, (Cats-foot)	<i>Capsella bursa-pastoris</i>	Shepherd's Purse
<i>Anthoxanthum odoratum</i>	Sweet Vernal-grass	<i>Cardamine bellidifolia</i>	Daisy-leaved Bittercress
<i>Anthriscus sylvestris</i>	Cow Parsley, Keck	<i>Cardamine nymanii</i>	(Cuckooflower)
<i>Anthyllis vulneraria</i>	Kidney-vetch, Ladie's Fingers	<i>Cardaminopsis petraea</i>	Northern Rock-cress
<i>Arabidopsis thaliana</i>	Thale Cress	<i>Carduus crispus</i>	Welted Thistle
<i>Arabis alpina</i>	Alpine Rock-cress	<i>Carex adelostoma</i>	
<i>Arabis glabra</i>	Tower Mustard	<i>Carex atrata</i>	Black Alpine-sedge
<i>Arabis hirsuta</i>	Hairy Rock-cress	<i>Carex atrofusca</i>	Scorched Alpine-sedge
<i>Arctostaphylos alpinus</i>	Mountain Bearberry	<i>Carex bigelowii</i>	Stiff Sedge
<i>Arctostaphylos uva-ursi</i>	Bearberry	<i>Carex brunneoscens</i>	
<i>Arenaria serpyllifolia</i>	Thyme-leaved Sandwort	<i>Carex canescens</i>	Hair Sedge
<i>Artemisia norvegica</i>	Norwegian Mugwort	<i>Carex capillaris</i>	
<i>Artemisia vulgaris</i>	Mugwort	<i>Carex capitata</i>	Fingered Sedge
<i>Asplenium viride</i>	Green Spleenwort	<i>Carex digitata</i>	Dioecious Sedge
<i>Astragalus alpinus</i>	Purple (Alpine) Milk-vetch	<i>Carex dioica</i>	Star Sedge
<i>Astragalus frigidus</i>		<i>Carex echinata</i>	Large Yellow-sedge
<i>Astragalus norvegicus</i>		<i>Carex flava</i>	
<i>Athyrium distentifolium</i>	Alpine Lady-fern	<i>Carex glacialis</i>	Hare's-foot Sedge
<i>Athyrium filix-femina</i>	Lady-fern	<i>Carex lachenalii</i>	
		<i>Carex lasiocarpa</i>	Slender Sedge

<i>Carex limosa</i>	Bog-sedge	<i>Eleocharis quinqueflora</i>	Few-flowered Spike-rush
<i>Carex livida</i>		<i>Elytrigia repens</i>	Common Couch
<i>Carex loliacea</i>		<i>Empetrum hermaphroditum</i>	Crowberry
<i>Carex magellanica</i>	Tall Bog-sedge	<i>Epilobium alsinifolium</i>	Chickweed Willow-herb
<i>Carex microglochin</i>	Bristle Sedge	<i>Epilobium anagallidifolium</i>	Alpine Willow-herb
<i>Carex misandra (fuliginosa)</i>		<i>Epilobium angustifolium</i>	Rosebay Willow-herb
<i>Carex muricata</i>	Prickly Sedge	<i>Epilobium collinum</i>	
<i>Carex nigra</i>	Common Sedge	<i>Epilobium davuricum</i>	
<i>Carex norvegica</i>	Close-headed Alpine-sedge	<i>Epilobium hornemannii</i>	
<i>Carex ornithopoda</i>	Birds-foot Sedge	<i>Epilobium lactiflorum</i>	
<i>Carex pallescens</i>	Pale Sedge	<i>Epilobium palustre</i>	Marsh Willowherb
<i>Carex panicea</i>	Carnation-grass	<i>Equisetum arvense</i>	Field (Common) Horsetail
<i>Carex parallela</i>		<i>Equisetum hyemale</i>	Rough Horsetail (Dutch Rush)
<i>Carex pauciflora</i>	Few-flowered Sedge	<i>Equisetum palustre</i>	Marsh Horsetail
<i>Carex rariflora</i>	Mountain Bog-sedge	<i>Equisetum pratense</i>	Shady Horsetail
<i>Carex rostrata</i>	Beaked Sedge, Bottle Sedge	<i>Equisetum scirpoideum</i>	
<i>Carex rupestris</i>	Rock Sedge	<i>Equisetum sylvaticum</i>	Wood Horsetail
<i>Carex saxatilis</i>	Russet Sedge	<i>Equisetum variegatum</i>	Variegated Horsetail
<i>Carex vaginata</i>	Sheathed Sedge	<i>Erigeron acer</i>	Blue Fleabane
<i>Carum carvi</i>	Caraway	<i>Erigeron borealis</i>	Alpine Fleabane
<i>Cassiope hypnoides</i>		<i>Erigeron eriocephalus</i>	
<i>Cerastium alpinum</i>	Alpine Mouse-ear	<i>Erigeron politus</i>	
<i>Cerastium arcticum</i>	Arctic Mouse-ear	<i>Erigeron uniflorus</i>	
<i>Cerastium cerastoides</i>	Starwort Mouse-ear	<i>Eriophorum angustifolium</i>	Common Cotton-grass
<i>Cerastium fontana</i>	Common Mouse-ear	<i>Eriophorum gracile</i>	Slender Cottongrass
<i>Cerastium glabratum</i>		<i>Eriophorum latifolium</i>	Broad-leaved Cottongrass
<i>Chamomilla suaveolens</i>	Pineapple weed, Rayless	<i>Eriophorum scheuchzeri</i>	
<i>Chamorchis alpina</i>		<i>Eriophorum vaginatum</i>	Hare's-tail Cotton-grass
<i>Chenopodium album</i>	Fat-hen	<i>Erysimum hieracifolium</i>	(Wallflower)
<i>Cicerbita alpina</i>	Blue Sowthistle	<i>Euphrasia frigida</i>	(Eyebright)
<i>Cirsium helenioides</i>	Melancholy Thistle	<i>Euphrasia lapponica</i>	
<i>Cirsium palustre</i>	Marsh Thistle	<i>Festuca ovina</i>	Sheep's Fescue
<i>Coeloglossum viride</i>	Frog Orchid	<i>Festuca rubra</i>	Red Fescue
<i>Convallaria majalis</i>	Lily-of-the-Valley	<i>Festuca vivipara</i>	Viviparous Sheep's Fescue
<i>Corallorrhiza trifida</i>	Coral-root	<i>Filipendula ulmaria</i>	Meadowsweet
<i>Cornus suecica</i>	Dwarf Cornel	<i>Fragaria vesca</i>	Wild Strawberry
<i>Corydalis intermedia</i>	(Corydalis)	<i>Gagea lutea</i>	Yellow Star-of-Bethlehem
<i>Corylus avellana</i>	Hazel, Cob-nut	<i>Galeopsis bifida</i>	Bifid Hemp-nettle
<i>Cotoneaster integerrimus</i>	Wild Cotoneaster	<i>Galium album</i>	Hedge Bedstraw
<i>Crepis paludosa</i>	Marsh Hawksbeard	<i>Galium boreale</i>	Northern Bedstraw
<i>Cryptogramma crispa</i>	Parsley Fern	<i>Galium odoratum</i>	Sweet Woodruff
<i>Cystopteris fragilis</i>	Brittle Bladder-fern	<i>Galium palustre</i>	Lesser Marsh Bedstraw
<i>Cystopteris montana</i>	Mountain Bladder-fern	<i>Galium uliginosum</i>	Fen Bedstraw
<i>Dactylis glomerata</i>	Cock's-foot	<i>Gentiana nivalis</i>	Small Gentian
<i>Dactylorhiza fuchsii</i>	Common Spotted-orchid	<i>Gentianella campestris</i>	Field Gentian
<i>Dactylorhiza maculata</i>	Spotted Orchid	<i>Gentianella tenella</i>	
<i>Daphne mezereum</i>	Mezereon	<i>Geranium robertianum</i>	Herb-Robert
<i>Deschampsia alpina</i>		<i>Geranium sylvaticum</i>	Wood Cranesbill
<i>Deschampsia caespitosa</i>	Tufted Hair-grass	<i>Geum rivale</i>	Water Avens
<i>Deschampsia flexuosa</i>	Wavy Hair-grass	<i>Glechoma hederacea</i>	Ground Ivy
<i>Diapensa lapponica</i>	Diapensia	<i>Gnaphalium norvegicum</i>	Highland Cudweed
<i>Diphasium alpinum</i>	Alpine Clubmoss	<i>Gnaphalium supinum</i>	Dwarf Cudweed
<i>Diphasium complanatum</i>	Issler's Clubmoss	<i>Gnaphalium sylvaticum</i>	Wood Cudweed
<i>Draba alpina</i>		<i>Goodyera repens</i>	Creeping Lady's-tresses
<i>Draba daurica</i>		<i>Gymnadenia conopsea</i>	Fragrant Orchid
<i>Draba dovrensis</i>		<i>Gymnocarpium dryopteris</i>	Oak Fern
<i>Draba fladnizensis</i>		<i>Gymnocarpium robertianum</i>	Limestone Polypody
<i>Draba incana</i>	Hoary Whitlowgrass	<i>Hieracium alpinum</i>	(Hawkweed)
<i>Draba lactea</i>	Lapland Whitlowgrass	<i>Hieracium murorum gr.</i>	
<i>Draba norvegica</i>	Rock Whitlowgrass	<i>Hieracium pilosella gr.</i>	Mouse-ear-hawkweeds
<i>Draba oxycarpa</i>		<i>Hieracium vulgatum gr.</i>	
<i>Drosera rotundifolia</i>	Round-leaved Sundew	<i>Hierochloë odorata</i>	Holy-grass
<i>Dryas octopetala</i>	Mountain Avens	<i>Hippuris vulgaris</i>	Marestail
<i>Dryopteris expansa (assimilis)</i>	Alpine Buckler-fern	<i>Humulus lupulus</i>	Hop
<i>Dryopteris filix-mas</i>	Male-fern	<i>Huperzia selago</i>	Fir Clubmoss
		<i>Hypericum hirsutum</i>	Hairy St John's Wort

<i>Hypericum maculatum</i>	Imperforate St John's Wort	<i>Oxycoccus quadripetalus</i>	
<i>Impatiens noli-tangere</i>	Touch-me-not	<i>Oxyria digyna</i>	Mountain Sorrel
<i>Juncus alpinoarticulatus</i> (<i>alpinus</i>)	Alpine Rush	<i>Papaver radicatum</i> ssp. <i>groevudalense</i>	Arctic Poppy
<i>Juncus arcticus</i>		<i>Paris quadrifolia</i>	Herb Paris
<i>Juncus biglumis</i>	Two-flowered Rush	<i>Parnassia palustris</i>	Grass of Parnassus
<i>Juncus bufonius</i>	Toad Rush	<i>Pedicularis lapponica</i>	
<i>Juncus bulbosus</i>	Bulbous Rush	<i>Pedicularis oederi</i>	
<i>Juncus castaneus</i>	Chestnut Rush	<i>Pedicularis palustris</i>	Marsh Lousewort
<i>Juncus filiformis</i>	Slender Rush	<i>Petasites frigidus</i>	Lapland Butterbur
<i>Juncus trifidus</i>	Three-leaved Rush	<i>Phalaris arundinacea</i>	Reed Canary-grass
<i>Juncus triglumis</i>	Three-flowered Rush	<i>Phipsia algida</i>	
<i>Juniperus communis</i>	Juniper	<i>Phleum alpinum</i>	Alpine Cat's-tail
<i>Knautia arvensis</i>	Field Scabious	<i>Phleum pratense</i>	Timothy, Cat's-tail
<i>Kobresia myosuroides</i>		<i>Phyllodoce caerulea</i>	Blue Heath
<i>Kobresia simpliciuscula</i>	False Sedge	<i>Pimpinella saxifraga</i>	Burnet-saxifrage
<i>Koenigia islandica</i>	Iceland Purslane	<i>Pinguicula villosa</i>	
<i>Lathyrus pratensis</i>	Meadow Vetchling	<i>Pinguicula vulgaris</i>	Common Butterwort
<i>Lathyrus vernus</i>		<i>Pinus sylvestris</i>	Scots Pine
<i>Leontodon autumnalis</i>	Autumnal Hawkbit	<i>Plantago lanceolata</i>	Ribwort
<i>Leucorchis albida</i>	Small White Orchid	<i>Plantago major</i>	Rat-tail Plantain
<i>Linaria vulgaris</i>	Common Toadflox	<i>Plantago media</i>	Hoary Plantain
<i>Linnaea borealis</i>	Twinflower	<i>Platanthera bifolia</i>	Lesser Butterfly Orchid
<i>Listera cordata</i>	Lesser Twayblade	<i>Poa alpigena</i>	
<i>Listera ovata</i>	Common Twayblade	<i>Poa alpina</i>	Alpine Meadow-grass
<i>Loiseleuria procumbens</i>	Mountain Azalea	<i>Poa annua</i>	Annual Poa
<i>Lotus corniculatus</i>	Birdsfoot-trefoil, Eggs-and-Bacon	<i>Poa arctica</i>	
<i>Luzula arcuata</i>	Curved (Arcuate) Woodrush	<i>Poa flexuosa</i>	Wavy Meadow-grass
<i>Luzula confusa</i>		<i>Poa glauca</i>	Glaucous Meadow-grass
<i>Luzula frigida</i>	Heath (Many-headed) Woodrush	<i>Poa nemoralis</i>	Wood Poa
<i>Luzula multiflora</i>		<i>Poa pratensis</i>	Smooth Meadow-grass
<i>Luzula parviflora</i>		<i>Poa remota</i>	
<i>Luzula pilosa</i>	Hairy Woodrush	<i>Polygonatum verticillatum</i>	Whorled Solomon's Seal
<i>Luzula spicata</i>	Spiked Woodrush	<i>Polygonum aviculare</i>	Knotgrass
<i>Luzula sudetica</i>		<i>Polygonum dumetorum</i>	Copse Bindweed
<i>Lychnis alpina</i>	(Red) Alpine Catchfly	<i>Polypodium vulgare</i>	Common Polypody
<i>Lychnis viscaria</i>	Sticky Catchfly, Red German Catchfly	<i>Polysticum lonchitis</i>	Holly Fern
<i>Lycopodium annotium</i>	Interrupted Clubmoss	<i>Populus tremula</i>	Aspen
<i>Lycopodium clavatum</i>	Stag's-Horn Moss	<i>Potamogeton filiformis</i>	Slender-leaved Pondweed
<i>Maianthemum bifolium</i>	May Lily	<i>Potamogeton natans</i>	Broad-leaved Pondweed
<i>Matricaria perforata</i>	Scentless Mayweed	<i>Potentilla argentea</i>	Hoary Cinquefoil
<i>Matteuccia struthiopteris</i>	Ostrich Fern	<i>Potentilla crantzii</i>	Alpine Cinquefoil
<i>Melampyrum pratense</i>	Common Cow-wheat	<i>Potentilla erecta</i>	(Common) Tormentil
<i>Melampyrum sylvaticum</i>	Wood Cow-wheat	<i>Potentilla nivea</i>	Snow Cinquefoil
<i>Melica nutans</i>	Mountain Melick	<i>Potentilla palustre</i>	Marsh Cinquefoil
<i>Menyanthes trifoliata</i>	Bogbean	<i>Primula scandinavica</i>	(Primrose)
<i>Milium effusum</i>	Wood Millet	<i>Prunella vulgaris</i>	Self-heal
<i>Minuartia biflora</i>		<i>Prunus padus</i>	Bird Cherry
<i>Minuartia rubella</i>	Alpine Sandwort	<i>Pteridium aquilinum</i>	Bracken
<i>Minuartia stricta</i>	Bog Sandwort	<i>Pulsatilla vernalis</i>	Pale Pasque Flower
<i>Mehringia trinervia</i>	Three-nerved Sandwort	<i>Pyrola chlorantha</i>	
<i>Molinia caerulea</i>	Purple Moor-grass	<i>Pyrola minor</i>	Common Wintergreen
<i>Moneses uniflora</i>	One-flowered Wintergreen	<i>Pyrola norvegica</i>	
<i>Monotropa hypopitys</i>	Yellow Birds-nest	<i>Ranunculus acris</i>	Meadow Buttercup
<i>Montia fontana</i>	Blinks	<i>Ranunculus confervoides</i>	(Water-crowfoot)
<i>Myosotis decumbens</i>	(Forget-me-not)	<i>Ranunculus glacialis</i>	Glacier Buttercup
<i>Myricaria germanica</i>		<i>Ranunculus nivalis</i>	Snow Buttercup
<i>Nardus stricta</i>	Mat-grass	<i>Ranunculus platanifolius</i>	Large White Buttercup
<i>Narthecium ossifragum</i>	Bog Asphodel	<i>Ranunculus pygmaeus</i>	Pigmy Buttercup
<i>Orchis mascula</i>	Early Purple Orchid	<i>Ranunculus repens</i>	Creeping Buttercup
<i>Orthilia secunda</i>	Serrated Wintergreen	<i>Ranunculus reptans</i>	Creeping Spearwort
<i>Oxalis acetosella</i>	Wood-sorrel	<i>Rhinanthus minor</i>	Yellow-rattle
<i>Oxycoccus microcarpus</i>	Small Cranberry	<i>Roegneria borealis</i>	
		<i>Roegneria canina</i>	Bearded Couch(-grass)
		<i>Rosa majalis</i>	
		<i>Rosa mollis</i>	Soft Downy-rose

<i>Rubus chamaemorus</i>	Cloudberry	<i>Sparganium hyperboreum</i>	
<i>Rubus idaeus</i>	Raspberry	<i>Stachys sylvatica</i>	Hedge Woundwort
<i>Rubus saxatilis</i>	Stone Bramble	<i>Stellaria calycantha</i>	
<i>Rumex acetosa</i>	(Common) Sorrel	<i>Stellaria graminea</i>	Lesser Stitchwort
<i>Rumex acetosella</i>	Sheep's Sorrel	<i>Stellaria media</i>	(Common) Chickweed
<i>Rumex longifolius</i>	Northern Dock	<i>Stellaria nemorum</i>	Wood Stitchwort, Wood Chickweed
<i>Sagina caespitosa</i>		<i>Succisa pratensis</i>	Devil's-bit Scabious
<i>Sagina intermedia</i>		<i>Tanacetum vulgare</i>	Tansy
<i>Sagina procumbens</i>	Procumbent Pearlwort	<i>Taraxacum cordatum</i>	(Dandelion)
<i>Sagina saginoides</i>	Alpine Pearlwort	<i>Taraxacum croceum</i>	(Dandelion)
<i>Salix arbuscula</i>	Mountain Willow	<i>Thalictrum alpinum</i>	Alpine Meadow Rue
<i>Salix borealis</i>		<i>Thelypteris phegopteris</i>	Beech Fern
<i>Salix caprea</i>	Goat Willow/Great Sallow	<i>Thlaspi alpestre</i>	Alpine Penny-cress
<i>Salix glauca</i>		<i>Tofieldia pusilla</i>	Scottish Asphodel
<i>Salix hastata</i>	Spear-leaved Willow	<i>Trientalis europea</i>	Chickweed Wintergreen
<i>Salix herbacea</i>	Dwarf Willow	<i>Trifolium pratense</i>	Red Clover
<i>Salix lanata</i>	Woolly Willow	<i>Trifolium repens</i>	White Clover, Dutch Clover
<i>Salix lapponum</i>	Downy Willow	<i>Triglochin palustris</i>	Marsh Arrow-grass
<i>Salix myrsinifolia</i>	Whortle-leaved Willow	<i>Trisetum spicatum</i>	
<i>Salix nigricans</i>	Dark-leaved Willow	<i>Tussilago farfara</i>	Colt's-foot
<i>Salix phyllicifolia</i>	Tea-leaved Willow	<i>Ulmus glabra</i>	Wych Elm
<i>Salix polaris</i>	Polar Willow	<i>Urtica dioica</i>	(Stinging) Nettle
<i>Salix reticulata</i>	Net-leaved Willow	<i>Utricularia minor</i>	Lesser Bladderwort
<i>Satureja acinos</i>	Basil-thyme	<i>Vaccinium myrtillus</i>	Bilberry, (Blaeberry), Whortleberry Huckleberry
<i>Satureja vulgaris</i>	Wild Basil	<i>Vaccinium uliginosum</i>	Whortleberry
<i>Saussurea alpina</i>	Alpine Saw-wort	<i>Vaccinium vitis-idaea</i>	Cowberry, Red Whortleberry
<i>Saxifraga adscendens</i>		<i>Valeriana sambucifolia</i>	Common Valerian
<i>Saxifraga aizoides</i>	Yellow (Mountain) Saxifrage	<i>Verbascum nigrum</i>	Dark Mullein
<i>Saxifraga caespitosa</i>	Tufted Saxifrage	<i>Veronica alpina</i>	Alpine Speedwell
<i>Saxifraga cernua</i>	Drooping Saxifrage	<i>Veronica chamaedrys</i>	Germander Speedwell
<i>Saxifraga cotyledon</i>		<i>Veronica fruticans</i>	Rock Speedwell
<i>Saxifraga foliolosa</i>		<i>Veronica officinalis</i>	Heath Speedwell
<i>Saxifraga hieracifolia</i>	Hawkweed(-leaved) Saxifrage	<i>Veronica pumila</i>	
<i>Saxifraga nivalis</i>	Alpine/Arctic Saxifrage	<i>Veronica scutellata</i>	Marsh Speedwell
<i>Saxifraga oppositifolia</i>	Purple Saxifrage	<i>Veronica serpyllifolia</i>	Thyme-leaved Speedwell
<i>Saxifraga rivularis</i>	Brook/Highland Saxifrage	<i>Vicia cracca</i>	Tufted Vetch
<i>Saxifraga stellaris</i>	Starry Saxifrage	<i>Vicia sepium</i>	Bush Vetch
<i>Saxifraga tenuis</i>		<i>Vicia sylvatica</i>	Wood vetch
<i>Scirpus (trichophorum) caespitosus</i>	Deer-grass	<i>Viola biflora</i>	
<i>Scirpus hudsonianus</i>		<i>Viola canina</i>	Heath Violet
<i>Scrophularia nodosa</i>	Figwort	<i>Viola collina</i>	
<i>Sedum annuum</i>	Annual Stonecrop	<i>Viola epipsila</i>	
<i>Sedum rosea</i>	Roseroot	<i>Viola mirabilis</i>	
<i>Selaginella selaginoides</i>	Lesser Clubmoss	<i>Viola montana</i>	
<i>Senecio vulgaris</i>	Groundsel	<i>Viola palustris</i>	Marsh Violet
<i>Sibbaldia procumbens</i>	Sibbaldia	<i>Viola riviniana</i>	Common Dog-violet
<i>Silene acaulis</i>	Moss Campion	<i>Viola rupestris</i>	Teesdale Violet
<i>Silene dioica</i>	Red Campion	<i>Viola selkirkii</i>	
<i>Silene rupestris</i>	Rock Catchfly	<i>Viola tricolor</i>	Wild Pansy
<i>Silene vulgaris</i>	Bladder Campion	<i>Woodsia alpina</i>	Alpine Woodsia
<i>Silene wahlbergella</i>	Northern Catchfly, Nodding	<i>Woodsia ilvensis</i>	Oblong Woodsia
<i>Solidago virgaurea</i>	Lychnis		
<i>Sorbus aucuparia</i>	Golden-rod		
<i>Sparganium angustifolium</i>	Rowan, Mountain Ash		
	Floating Bur-reed		Report Count: 434

FUNGI

Fungi can also tell us something about the climate and the community where they occur. The list below is based on only a few days of investigation in the Grøvu valley above the end of the road (> 800 m). 139 species have so far been recorded. There may be several times that number. Some species only or mostly occur in the alpine zones, and can be referred to as mountain species. Many of these make mycorrhiza with *Betula nana*, *Salix herbacea*, *Polygonum viviparum* or *Dryas octopetala*. Some species of *Pezizales*, such as *Peziza alaskana* and some species of *Scutellinia*, only occur on calcareous sand on river banks in the mountains.

* Mountain species

<i>Agaricus campestris</i>	<i>Exobasidium aequale</i>	<i>Mycenella lasiosperma</i>
* <i>Aleurodiscus lapponicus</i>	<i>Flammulina velutipes</i>	<i>Octospora sp.</i>
<i>Amamita crocea</i>	* <i>Galerina pseudomycenopsis</i>	<i>Ombrophila violacea</i>
<i>Amamita muscaria</i>	<i>Geoglossum arenarium</i>	* <i>Omphalina obscurata</i>
<i>Amamita regalis</i>	<i>Geopora nicaeensis</i>	<i>Omphalina philonotis</i>
<i>Amamita vaginata</i> var. <i>vaginata</i>	<i>Hapalopilus nidulans</i>	* <i>Omphalina umbellifera</i>
<i>Amylostereum laevigatum</i>	<i>Hebeloma crustuliniforme</i>	<i>Panaeolus acuminatus</i>
<i>Arrhenia acerosa</i>	* <i>Hygrocybe aff. laeta</i>	<i>Panaeolus fimiputris</i>
<i>Boletus edulis</i>	<i>Hygrocybe coccinea</i>	<i>Panellus serotinus</i>
<i>Bovista nigrescens</i>	<i>Hygrocybe conica</i>	* <i>Peziza alaskana</i>
<i>Bryoglossum gracile</i>	<i>Hygrocybe miniata</i>	<i>Peziza badioconfusa</i>
<i>Calvatia utriformis</i>	<i>Hygrocybe reai</i>	<i>Phanerochaete laevis</i>
<i>Camarophyllum virgineus</i>	<i>Hygrocybe turunda</i>	<i>Phellinus igniarius</i>
<i>Cerrena unicolor</i>	<i>Hygrophorus melizeus</i>	<i>Pholiota alnicola</i>
<i>Chalciporus piperatus</i>	<i>Hymenochaete cinnamomea</i>	<i>Pholiota lenta</i>
<i>Cheilymenia ciliata</i>	<i>Hymenochaete fuliginosa</i>	<i>Pholiota spumosa</i>
<i>Cheilymenia coprinaria</i>	<i>Hypholoma elongatum</i>	<i>Pleurotus pulmonarius</i>
<i>Clavaria argillacea</i>	<i>Hypholoma myosotis</i>	<i>Polyporus brumalis</i>
<i>Clavaria tenuipes</i>	<i>Hypocreafusca</i>	<i>Polyporus ciliatus</i>
<i>Clavulina cinerea</i>	<i>Hypoxylon macrosporum</i>	<i>Polyporus melanopus</i>
<i>Clavulina cristata</i>	<i>Inermisia aggregata</i>	<i>Polyporus varius</i>
<i>Clitocybe clavipes</i>	<i>Inocybe calamistrata</i>	<i>Psathyrella candolleana</i>
* <i>Clitocybe cf. favrei</i>	<i>Inocybe dulcamara</i>	<i>Psilocybe merdaria</i>
<i>Clitopilus hobsonii</i>	<i>Inocybe leiocephala</i>	<i>Pycnoporus cinnabarinus</i>
<i>Collybia cirrata</i>	<i>Laccaria bicolor</i>	<i>Ramsbottomia asperior</i>
<i>Collybia dryophila</i>	<i>Laccaria laccata</i>	<i>Rhytisma salicinum</i>
<i>Coprobria granulata</i>	* <i>Lactarius dryadophilus</i>	* <i>Rickenella pseudogrisella</i>
* <i>Cortinarius alpinus</i>	<i>Lactarius pubescens</i>	<i>Rickenella swartzii</i>
<i>Cortinarius anomalus</i>	<i>Lactarius spinulosus</i>	<i>Russula aeruginea</i>
* <i>Cortinarius cinnamomeoluteus</i>	* <i>Lactarius subcircellatus</i>	<i>Russula claroflava</i>
<i>Cortinarius cf. elegantior</i>	<i>Lactarius theiogalus</i>	<i>Russula emetica</i>
<i>Cortinarius flexipes</i>	<i>Lamprospora lutziana</i>	* <i>Russula nana</i>
* <i>Cortinarius cf. pauperculus</i>	* <i>Leccinum rotundifoliae</i>	* <i>Russula norvegica</i>
* <i>Cortinarius septentrionalis</i>	<i>Leccinum scabrum</i>	* <i>Russula salicetcola</i>
* <i>Cortinarius subtorvus</i>	<i>Leccinum variicolor</i>	<i>Russula xerampelina</i>
<i>Cortinarius talus</i>	<i>Leccinum versipelle</i>	* <i>Scutellinia kerguelensis</i>
<i>Crepidotus versutus</i>	* <i>Lophodermium maculare</i>	<i>Scutellinia scutellata</i>
<i>Cystoderma jasonis</i>	<i>Lophodermium tumidum</i>	* <i>Scutellinia subhirtella</i>
<i>Diatrype stigma</i>	<i>Melanoleuca cognata</i>	<i>Stereum hirsutum</i>
<i>Entoloma asprellum</i>	* <i>Melanoleuca subalpina</i>	<i>Tarzetta cupularis</i>
* <i>Entoloma cf. catalounicum</i>	<i>Merismodes anomalus</i>	<i>Trametes ochracea</i>
<i>Entoloma conferendum</i>	<i>Mitrula paludosa</i>	<i>Tricholoma fulvum</i>
<i>Entoloma nidorosum</i>	* <i>Multiclavula corynoides</i>	<i>Trichophaea gregaria</i>
<i>Entoloma rhodopolium</i>	<i>Mycena abramsii</i>	<i>Tubaria furfuracea</i>
<i>Entoloma sericellum</i>	<i>Mycena filopes</i>	<i>Tulasnella eichleriana</i>
<i>Entoloma sericeum</i>	<i>Mycena pura</i>	
<i>Exidia repanda</i>	<i>Mycena urania</i>	

BIRDS

BIRD COMMUNITIES

Each main type of forest, open areas, rivers and lakes has its own avifauna or "bird community". This has been carefully studied during investigations in connection with the extensive planning of hydroelectric power projects all over Norway.

Habitat	Bird community	Number of species in this area
Agricultural landscapes	Cultural Landscape Community	35-40
Pine forests	Redstart (<i>Phoenicurus phoenicurus</i>) Community	~ 40
Birch forests	Willow Warbler (<i>Phylloscopus trochilus</i>)-Brambling (<i>Fringilla montifringilla</i>) Community	~ 27
Willow shrubs, low alpine subzone	Willow Warbler (<i>Phylloscopus trochilus</i>)-Reed Bunting (<i>Emberiza schoeniclus</i>) Community	~ 25
Bare mountain areas	Meadow Pipit (<i>Anthus pratensis</i>) Community	~ 14
Marshes and wetlands	Snipe (<i>Gallinago gallinago</i>) Community	~ 36
Lakes	Common Sandpiper (<i>Tringa hypoleucos</i>)-Black-throated Diver (<i>Gavia arctica</i>) Community	~ 18
Rivers and streams	Dipper (<i>Cinclus cinclus</i>) Community	8-10

BIRD SPECIES LIST

The list below numbers 130 species observed in the catchment area of the River Grøvu. Birds of prey (*Falconiformes*) are excluded from the list because knowledge about the occurrence of these species may be spread and misused. 84 species have been observed in the Grøvu valley itself above the end of the road (> 800 m) ; 58 of these were breeding or possibly breeding.

<i>Acanthis flammea</i>	Redpoll	<i>Clangula hyemalis</i>	Long-tailed Duck
<i>Acanthis flavirostris</i>	Twite	<i>Columba palumbus</i>	Woodpigeon
<i>Aegithalos caudatus</i>	Long-tailed Tit	<i>Corvus corax</i>	Raven
<i>Aegolius funereus</i>	Tengmalm's Owl	<i>Corvus corone</i>	Carriion Crow
<i>Alauda arvensis</i>	Skylark	<i>Crex crex</i>	Corncrake
<i>Anas crecca</i>	Teal	<i>Cuculus canorus</i>	Cuckoo
<i>Anas penelope</i>	Wigeon	<i>Delichon urbica</i>	House Martin
<i>Anas platyrhynchos</i>	Mallard	<i>Dendrocopos leucotos</i>	White-backed Woodpecker
<i>Anser brachyrhynchus</i>	Pink-footed Goose	<i>Dendrocopos major</i>	Great Spotted Woodpecker
<i>Anthus pratensis</i>	Meadow Pipit	<i>Dendrocopos minor</i>	Lesser Spotted Woodpecker
<i>Anthus trivialis</i>	Tree Pipit		
<i>Apus apus</i>	Swift	<i>Dryocopus martius</i>	Black Woodpecker
<i>Ardea cinerea</i>	Grey Heron	<i>Emberiza citrinella</i>	Yellowhammer
<i>Asio flammeus</i>	Short-eared Owl	<i>Emberiza hortulana</i>	Ortolan Bunting
<i>Asio otus</i>	Long-eared Owl	<i>Emberiza lapponicus</i>	Lapland Bunting
<i>Aythya marila</i>	Scaup	<i>Emberiza schoeniclus</i>	Reed Bunting
<i>Bombycilla garrulus</i>	Waxwing	<i>Eremophila alpestris</i>	Shorelark
<i>Branta canadensis</i>	Canada Goose	<i>Eriothacus rubecula</i>	Robin
<i>Bucephala clangula</i>	Goldeneye	<i>Eudromias morinellus</i>	Dotterel
<i>Calidris alpina</i>	Dunlin	<i>Ficedula hypoleuca</i>	Pied Flycatcher
<i>Calidris maritima</i>	Purple Sandpiper	<i>Fringilla coelebs</i>	Chaffinch
<i>Calidris temminckii</i>	Temminck's Stint	<i>Fringilla montifringilla</i>	Brambling
<i>Carduelis carduelis</i>	Goldfinch	<i>Gallinago gallinago</i>	Snipe
<i>Carduelis spinus</i>	Siskin	<i>Garrulus glandarius</i>	Jay
<i>Certhia familiaris</i>	Treecreeper	<i>Gavia arctica</i>	Black-throated Diver
<i>Charadrius hiaticula</i>	Ringed Plover	<i>Glaucidium passerinum</i>	Pygmy Owl
<i>Cinclus cinclus</i>	Dipper	<i>Haematopus ostralegus</i>	Oystercatcher

<i>Hippolais icterina</i>	Icterine Warbler	<i>Pica pica</i>	Magpie
<i>Hirundo rustica</i>	Swallow	<i>Picoides tridactylus</i>	Three-toed Woodpecker
<i>Jynx torquilla</i>	Wryneck	<i>Picus canus</i>	Grey-headed Woodpecker
<i>Lagopus lagopus</i>	Willow Grouse	<i>Picus viridis</i>	Green Woodpecker
<i>Lagopus mutus</i>	Ptarmigan	<i>Pinicola enucleator</i>	Pine Grosbeak
<i>Lanius excubitor</i>	Great Grey Shrike	<i>Plectrophenax nivalis</i>	Snow Bunting
<i>Larus argentatus</i>	Herring Gull	<i>Pluvialis apricaria</i>	Golden Plover
<i>Larus canus</i>	Common Gull	<i>Prunella modularis</i>	Dunnock
<i>Loxia leucoptera</i>	Two-barred Crossbill	<i>Pyrrhula pyrrhula</i>	Bullfinch
<i>Loxia pytyopsittacus</i>	Parrot Crossbill	<i>Regulus regulus</i>	Goldcrest
<i>Luscinia svecica</i>	Bluethroat	<i>Riparia riparia</i>	Sand Martin
<i>Lymnocryptes minimus</i>	Jack Snipe	<i>Saxicola rubetra</i>	Whinchat
<i>Lyrurus tetrix</i>	Black Grouse	<i>Scolopax rusticola</i>	Woodcock
<i>Melanitta fusca</i>	Velvet Scoter	<i>Sitta europaea</i>	Nuthatch
<i>Melanitta nigra</i>	Common Scoter	<i>Stercorarius longicaudus</i>	Long-tailed Skua
<i>Mergus merganser</i>	Goosander	<i>Sterna paradisaea</i>	Arctic Tern
<i>Mergus serrator</i>	Red-breasted Merganser	<i>Streptopelia decaocto</i>	Collared Turtle Dove
<i>Motacilla alba</i>	White Wagtail	<i>Strix aluco</i>	Tawny Owl
<i>Motacilla flava thunbergi</i>	Yellow Wagtail	<i>Sturnus vulgaris</i>	Starling
<i>Muscicapa striata</i>	Spotted Flycatcher	<i>Surnia ulula</i>	Hawk Owl
<i>Nucifraga caryocatactes</i>	Nutcracker	<i>Sylvia atricapilla</i>	Blackcap
<i>Numenius arquata</i>	Curlew	<i>Sylvia borin</i>	Garden Warbler
<i>Numenius phaeopus</i>	Whimbrel	<i>Sylvia curruca</i>	Lesser Whitethroat
<i>Nyctaea scandiaca</i>	Snowy Owl	<i>Tetrao urogallus</i>	Capercaillie
<i>Oenanthe oenanthe</i>	Wheatear	<i>Tringa erythropus</i>	Spotted Redshank
<i>Parus ater</i>	Coal Tit	<i>Tringa glareola</i>	Wood Sandpiper
<i>Parus caeruleus</i>	Blue Tit	<i>Tringa hypoleucus</i>	Common Sandpiper
<i>Parus cristatus</i>	Crested Tit	<i>Tringa nebularia</i>	Greenshank
<i>Parus major</i>	Great Tit	<i>Tringa ochropus</i>	Green Sandpiper
<i>Parus montanus</i>	Willow Tit	<i>Tringa totanus</i>	Redshank
<i>Parus palustris</i>	Marsh Tit	<i>Troglodytes troglodytes</i>	Wren
<i>Passer domesticus</i>	House Sparrow	<i>Turdus iliacus</i>	Redwing
<i>Perisoreus infaustus</i>	Siberian Jay	<i>Turdus merula</i>	Blackbird
<i>Phalaropus lobatus</i>	Red-necked Phalarope	<i>Turdus philomelos</i>	Song Thrush
<i>Philomachus pugnax</i>	Ruff	<i>Turdus pilaris</i>	Fieldfare
<i>Phoenicurus phoenicurus</i>	Redstart	<i>Turdus torquatus</i>	Ring Ouzel
<i>Phylloscopus collybita</i>	Chiffchaff	<i>Upupa epops</i>	Hoopoe
<i>Phylloscopus sibilatrix</i>	Wood Warbler	<i>Vanellus vanellus</i>	Lapwing
<i>Phylloscopus trochilus</i>	Willow Warbler		

MAMMALS AND OTHER VERTEBRATES

The Dovre - Grøvu area is perhaps the most undisturbed mountain ecosystem in Norway and Northern Europe because it has an original population of wild Reindeer (*Rangifer tarandus tarandus*) and good populations of Wolverines (Gluttons) (*Gulo gulo*) and Polar foxes (*Alopex lagopus*).

At least 28 species of mammals have been recorded in the Grøvu area. Two of them - the wolf and the brown bear - are scarcely ever seen now. Hardly anything is known about small rodents in this area. Species present in adjacent areas that may also occur in the Grøvu area are the Root vole (*Microtus oeconomus*), Bank vole (*Clethrionomys glareolus*), Grey-sided vole (*Clethrionomys rufocaninus*), Yellow-necked mouse (*Apodemus flavicollis*), and Northern birch mouse (*Sicista betulina*).

Other vertebrates in the area are the Frog and the Viper. The dominating fish is the Trout. The Salmon occurs only in lower parts, but it has nearly vanished in recent years due to the introduction of the parasite *Gyrodactylus salaris* and perhaps other factors, such as over-fishing at sea and hydroelectric projects.

Latin name	English name	Norwegian name
<i>Sorex araneus</i>	Common shrew	vanlig spissmus
<i>Neomys fodiens</i>	Water shrew	vannspissmus
<i>Plecotus auritus</i>	Common long-eared bat	langøreflaggermus
<i>Eptesicus nilssonii</i>	Northern bat	nordflaggermus
<i>Lepus timidus</i>	Mountain hare	hare
<i>Sciurus vulgaris</i>	Red squirrel	ekorn
<i>Lemmus lemmus</i>	Norway lemming	lemen
<i>Mus musculus</i>	House mouse	husmus
<i>Rattus norvegicus</i>	Common rat	brun rotte
<i>Microtus agrestis</i>	Field vole	markmus
<i>Arvicola terrestris</i>	Northern water vole	vånd
<i>Canis lupus</i>	Wolf	ulv
<i>Vulpes vulpes</i>	Red fox	rødrev
<i>Alopex lagopus</i>	Arctic fox	fjellrev
<i>Ursus arctos</i>	Brown bear	bjørn
<i>Mustela erminea</i>	Stoat (Ermine)	røyskatt
<i>Mustela nivalis</i>	Weasel	snømus
<i>Mustela vison</i>	Mink	mink
<i>Martes martes</i>	Pine marten	mår
<i>Gulo gulo</i>	Wolverine	jerv
<i>Meles meles</i>	Badger	grevling
<i>Lutra lutra</i>	Otter	oter
<i>Felis lynx</i>	Lynx	gaupe
<i>Cervus elaphus</i>	Red deer	hjort
<i>Capreolus capreolus</i>	Roe deer	rådyr
<i>Alces alces</i>	Elk	elg
<i>Rangifer tarandus</i>	Reindeer	villrein
<i>Ovis moschatus</i>	Musk ox	moskus
<i>Rana temporaria</i>	European common frog	frosk
<i>Vipera berus</i>	Viper	hoggorm
<i>Salmo trutta</i>	Trout	ørret
<i>Salmo salar</i>	Salmon	laks

FRESHWATER INVERTEBRATES

LAKES

1. Planktonic organisms (Crustacea)

Eight species of planktonic Crustacea have been recorded in the lakes (bold type = the most important species by number and biomass):

Holopedium gibberum, ***Daphnia longispina*** (seem to reach the highest altitudes), ***Bosmina longispina***, *Acanthodiaptomus denticornis*, *Arctodiaptomus laticeps*, *Mixodiaptomus laciniatus*, *Heterocope saliens* and ***Cyclops scutifer***.

2. Shallow water organisms (Crustacea)

Twenty species of Crustacea have been recorded from the shallow zones (bold type = numerically the most important species):

Sida crystallina, ***Holopedium gibberum***, ***Daphnia longispina***, ***Bosmina longispina***, *Eurycercus lamellatus*, *Acroperus elongatus*, *Acroperus harpae*, *Alona affinis*, *Rhynchotalona falcata*, ***Chydorus sphaericus***, ***Polyphemus pediculus***, *Ophryoxus gracilis*, *Acanthodiaptomus denticornis*, ***Mixodiaptomus laciniatus***, *Arctodiaptomus laticeps*, *Heterocope saliens*, ***Cyclops scutifer***, *Cyclops abyssorum*, *Eucyclops serrulatus*, *Megacyclops viridis*.

3. Bottom organisms (benthos)

The table below shows the dominance of different groups in percentages of the total number of individuals, found by rooting (10 lakes). n = 5035

Group	%	Group	%
<i>Turbellaria</i>	< 1	<i>Coleoptera: Hydrodephaga</i>	7
<i>Nematoda</i>	< 1	<i>Trichoptera</i>	7
<i>Oligochaeta</i>	13	<i>Diptera: Tipulidae</i>	4
<i>Lepidurus arcticus</i>	< 1	<i>Diptera: Chironomidae</i>	29
<i>Ephemeroptera</i>	23	<i>Diptera larvae indet.</i>	< 1
<i>Plecoptera</i>	6	<i>Hydracarina</i>	10
<i>Megaloptera</i>	< 1	<i>Mollusca: Sphaeridae</i>	< 1

RIVERS AND STREAMS

The table below shows the dominance of different groups in percentages of the total number of individuals, found by rooting (10 rivers and streams). n = 3779

Group	%	Group	%
<i>Turbellaria</i>	< 1	<i>Trichoptera</i>	4
<i>Nematoda</i>	< 1	<i>Diptera: Tipulidae</i>	2
<i>Oligochaeta</i>	1	<i>Diptera: Chironomidae</i>	11
<i>Ephemeroptera</i>	39	<i>Diptera: Simuliidae</i>	3
<i>Plecoptera</i>	15	<i>Hydracarina</i>	24
<i>Coleoptera: Hydrodephaga</i>	< 1	<i>Mollusca: Sphaeridae</i>	< 1

The table below shows the dominance of different species of **Ephemeroptera** in percentages of the total number of individuals, found by rooting (10 rivers and streams). n = 1475

Species	%	Species	%
<i>Ameletus inopinatus</i>	< 1	<i>Baetis fuscatus/scambus</i>	3
<i>Parameletus chelifer</i>	< 1	<i>Baetis vernus/subalpinus</i>	15
<i>Siphlonurus sp.</i>	28	<i>Heptagenia dalecarlica</i>	2
<i>Baetis lapponicus</i>	< 1	<i>Leptophlebia sp.</i>	< 1
<i>Baetis macani</i>	< 1	<i>Ephemerella aurivilli</i>	< 1
<i>Baetis rhodani</i>	48		

The table below shows the dominance of different species of **Plecoptera** in percentages of the total number of individuals, found by rooting (10 rivers and streams). n = 550

Species	%	Species	%
<i>Arcynopteryx compacta</i>	3	<i>Amphinemura borealis</i>	1
<i>Diura bicaudata</i>	< 1	<i>Amphinemura standfussi</i>	6
<i>Diura nanseni</i>	33	<i>Nemurella picteti</i>	< 1
<i>Isoperla sp.</i>	6	<i>Protoneura meyeri</i>	6
<i>Isoperla grammatica</i>	33	<i>Capnia atrata</i>	1
<i>Isoperla obscura</i>	4	<i>Leuctra sp.</i>	< 1
<i>Taeniopteryx nebulosa</i>	2	<i>Leuctra fusca</i>	2

REFERENCES

- Aksjon varig vern av Grøvu, 1983:** Grøvuvassdraget - natur og kultur. Sunndalsøra 1983, 144 pp.
- Bevanger, K. & J. B. Jordal, 1981:** Fuglefaunaen i Drivas nedbørfelt, Oppland, Møre og Romsdal og Sør-Trøndelag fylker. DKNVS Mus. Rapport Zool. Ser. 1981-7, 145 pp.
- Hagen, M. E., 1976a:** Botaniske undersøkelser i Grøvu-området i Sunndal kommune, Møre og Romsdal. DKNVSM rapport, Botanisk Serie 1976-5. 57 pp.
- Hagen, M. E., 1976b:** Flora og vegetasjon i Grøvuområdet på Nordmøre. Thesis cand. real. Univ. Trondheim. 188 pp. + vegetation map. Unpubl.
- Holten, J.I., 1977:** Floristiske og vegetasjonsøkologiske undersøkelser i sør- og nordeksponerte lier ved Gjøra i Sunndal. Thesis cand. real. Univ. Trondheim. 332 pp. 90 dot maps. 1 vegetation map. Unpubl.
- Holten, J.I., 1979:** Botaniske undersøkelser i Øvre Sunndalen, Grødalen, Lindalen og nærliggende fjellstrøk. Botaniske undersøkelser i 10-års verna vassdrag. Delrapport 1. DKNVSM rapport, Botanisk Serie 1979-7. 32 pp.
- Holten, J.I., 1986:** Autecological and phytogeographical investigations along a coast-inland transect at Nordmøre, central Norway. Dr. philos. thesis in botany. 349 pp. + 69 pls. Unpubl.
- Jordal, J. B., 1993:** Soppfloraen i Møre og Romsdal. Fylkesmannen i Møre og Romsdal, Miljøvernavdelinga, rapport nr. 2 1993. 189 pp.
- Jordal, J. B., J.O. Gjershaug & A.I. Holen, 1974:** Faunaundersøkelser m.m. i Grøvuområdet 1974. Rapport nr. 1. Rapport til Miljøverndepartementet under Prosjekt Landsplan for verneverdige områder/forekomster. 33 pp. + maps and fotos. Unpubl.
- Jordal, J. B., J.O. Gjershaug & A.I. Holen, 1974:** Faunaundersøkelser m.m. i Grøvuområdet 1975. Rapport nr. 2. Rapport til Miljøverndepartementet under Prosjekt Landsplan for verneverdige områder/forekomster. 32 pp. + fotos. Unpubl.
- Jordal, J.B. & S. Sivertsen, 1992:** Soppfloraen i noen ugjødsla beitemarker i Møre og Romsdal. Fylkesmannen i Møre og Romsdal, Miljøvernavdelinga, rapport nr. 11 1992. 65 pp.
- NINA-project 1993,** unpubl.
- Nøst, T., 1981:** Ferskvannsbiologiske og hydrografiske undersøkelser i Drivavassdraget 1979-80. DKNVS Mus. Rapport Zool. Ser. 1981-10. 77 pp. + 11 tables.
- Sollid, J.L. & L. Sørbel, 1981:** Kvartærgeologsik verneverdige områder i Midt-Norge. Miljøverndepartementet, avd. for naturvern og friluftsliv. Rapport T-524. 207 pp. + map.
- Sæther, B., S. Bretten, M. Hagen, H. Taagvold & L. E. Vold, 1981:** Flora og vegetasjon i Drivas nedbørfelt, Møre og Romsdal, Oppland og Sør-Trøndelag. Botaniske undersøkelser i 10-års verna vassdrag. Delrapport 4. DKNVSM rapport, Botanisk Serie 1981-6. 127 pp. + vedlegg.

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