

Das Haselhuhnprojekt

Naturschutzoblenkung

LJV Rheinland-Pfalz, 09. April 2016



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LANDESAMT FÜR UMWELT

Ludwig Simon, Landesamt für Umwelt, Mainz



Managing RLP coppice forests for
the hazel grouse (*Bonasa bonasia*)



The hazel grouse in Rhineland-Palatinate (RLP)

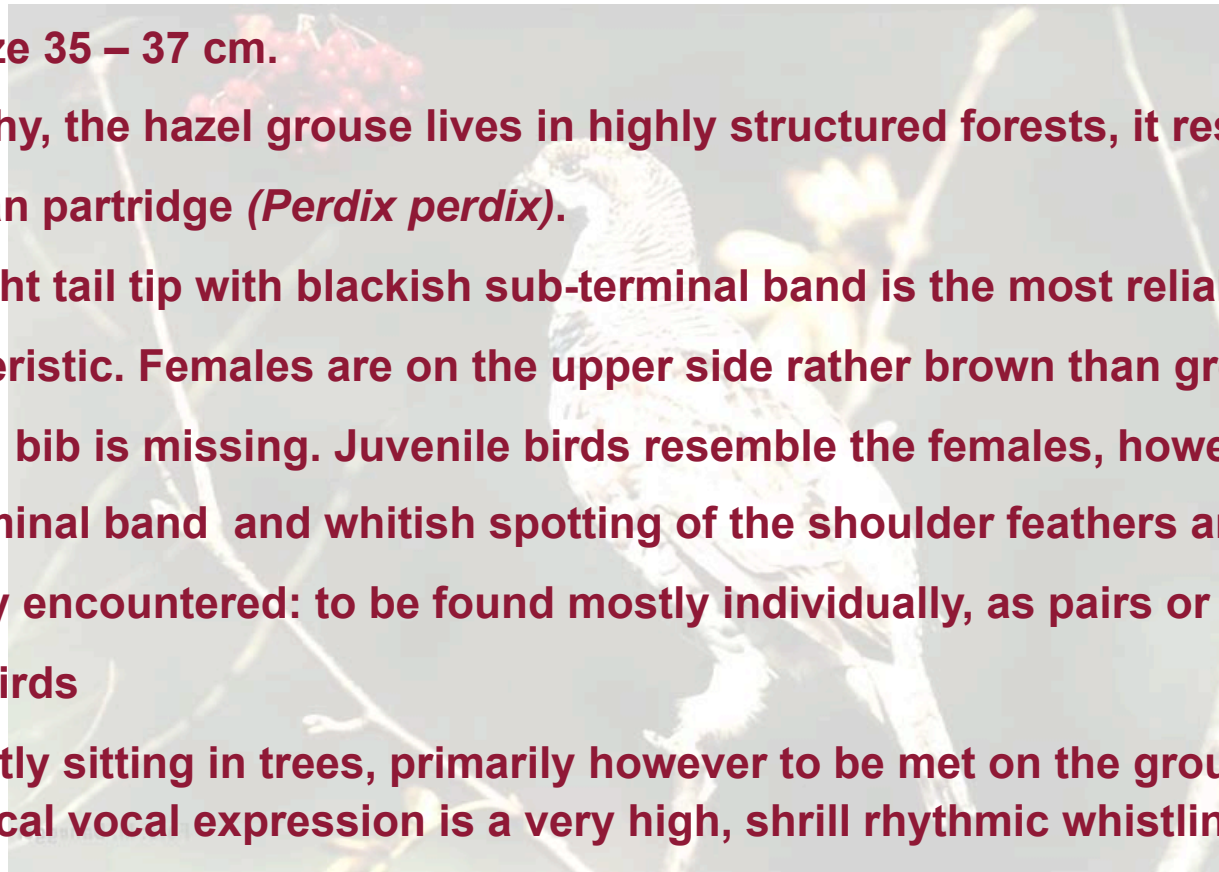
- Biology, characteristics
- Habitat
- Range of distribution
- Hazards
- Activities
- Recommendations for protecting the species
- Public relations (PR)
- Hazel grouse proofs





Biology, characteristics

- Body size 35 – 37 cm.
- Small, shy, the hazel grouse lives in highly structured forests, it resembles the European partridge (*Perdix perdix*).
- The bright tail tip with blackish sub-terminal band is the most reliable characteristic. Females are on the upper side rather brown than grey and a black-throated bib is missing. Juvenile birds resemble the females, however the dark sub-terminal band and whitish spotting of the shoulder feathers are lacking.
- Typically encountered: to be found mostly individually, as pairs or females with young birds
- Frequently sitting in trees, primarily however to be met on the ground.
- The typical vocal expression is a very high, shrill rhythmic whistling sound.:





Characteristic features

feathers



Bonasa bonasia



droppings

setting



traces

tracks





Biology

- Hazel grouses live on definite territories.
- The mating season is in fall and early spring, however even then the hazel grouses are not substantially more conspicuous.
- Ground-breeder: 5-10 eggs (yellow-beige and brown spotted). As extreme nidifugous birds the young ones leave the nest with the mother bird after hatching; they are able to fly as early as 14 days old.
- Food: comprising in early summer and during summer young shoots of softwood deciduous tree species, grass species, herbs and ferns, ground vegetation and animal food; berries in autumn; and in winter willow-catkins and buds of specific softwood species.
- Hazel grouses are resident birds which generally are philopatric.

<http://www.artefakt.rlp.de/>

[http://www.natura2000.rlp.de/steckbriefe/index.php?a=s&b=aHazel grouse &c=vsg&pk=V010](http://www.natura2000.rlp.de/steckbriefe/index.php?a=s&b=aHazel+grouse+&c=vsg&pk=V010)

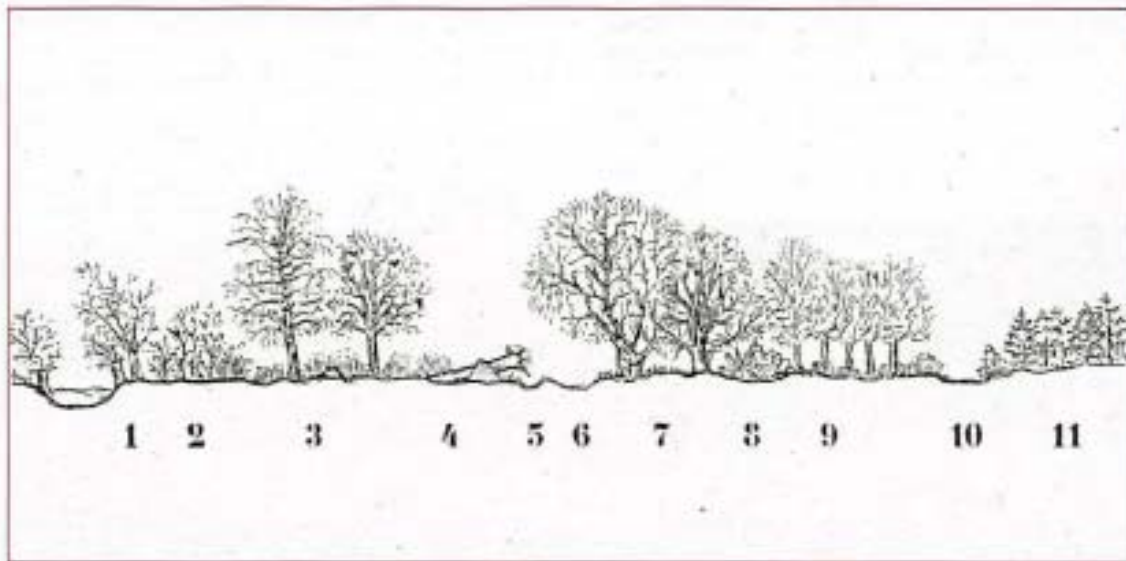


Habitat

Hazel grouses need contiguous and highly structured forests offering protection and food. They are the representative species for deciduous coppice forests. In mountainous areas they are mostly found in spruce and fir stands rich in underwood. In Central Europe they are present more often in deciduous or mixed forests. **They mainly occur in forests of early succession stages (coppice with field crops and coppice forests).** They prefer birch-oak coppices with field crops comprising minor or well structured undergrowth as well as horizontally and vertically strongly structured areas along brooks and spring niches. In the Eifel Mts. and in the Ahr River valley steep slopes with former coppices are settled which are similarly structured like coppices with field crops. Electrical power lines, windfalls and especially created “hazel grouse pockets” (in German „Haselhuhntaschen“) are readily accepted.



Typical habitat showing a small brook valley which is diversely structured



Schema der Biotopstruktur eines Haselhuhnreviers

- | | |
|--|--|
| 1 Bachbegleitende Erlen und Weiden als Nahrungsreservoir im Winter | 7 Sukzessionsfläche mit Hainbuche und Eiche als Versteck und Nahrungsreservoir |
| 2 Weißdorn-, Schlehen- und Haseldickung als Versteck und Nahrungsreservoir | 8 Versteckter Brutplatz |
| 3 Lichtung mit vielfältiger Bodenvegetation | 9 Buchenstangenholz als Winterschlafplatz |
| 4 Windwurfstamm als Singwarte | 10 Vegetationsreiche Wegböschung mit Brombeer- und Himbeersträuchern |
| 5 Offener Boden zur Aufnahme von Magensteinen | 11 Schlafplatz und Versteck in Jungfichten |
| 6 Huderpfanne | |

Sandy forest walks with slopes are readily used for dust-bathing. There is a significant seasonal change concerning the habitat: in winter time the hazel grouses move into more densely stocked forested areas with higher proportions of coniferous wood; at severe cold temperatures snow caves are created. **The average size of habitat territories comprises 20-40 hectares in Central Europe** (overall annual home range: 80 ha), depending on the demands required for surviving. Since hazel grouses do not like to cross over open fields, it is particularly strongly bound to areas that are interconnected with suitable habitat structures.



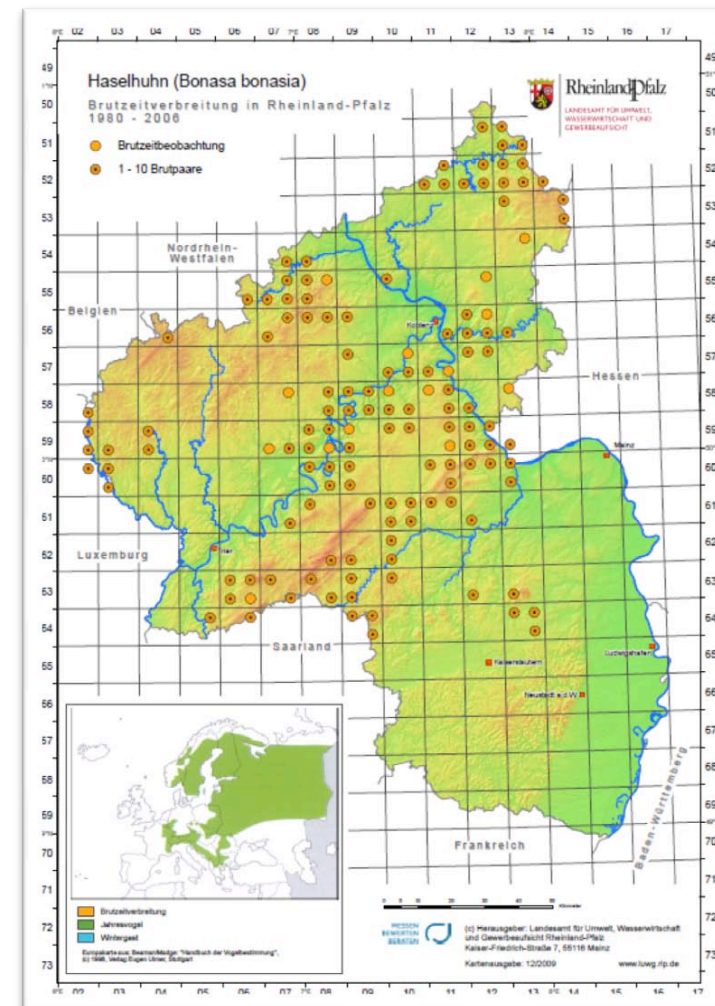
Distribution

In Germany, beyond the Alps, hazel grouse populations were found to be present in the Bavarian Forest, the Black Forest, the Harz Mts. and the Rhenish Slate Mts..

In Rhineland-Palatinate the hazel grouse was detected exclusively north of the Nahe River.

Major areas of distribution comprise the Middle and Lower Mosel River and the tributary valleys, the Rhine River valley, the Eifel Mts., the Westerwald and the Siegerland region, the Ahr River and Lahn

River valleys and the Taunus Mts.



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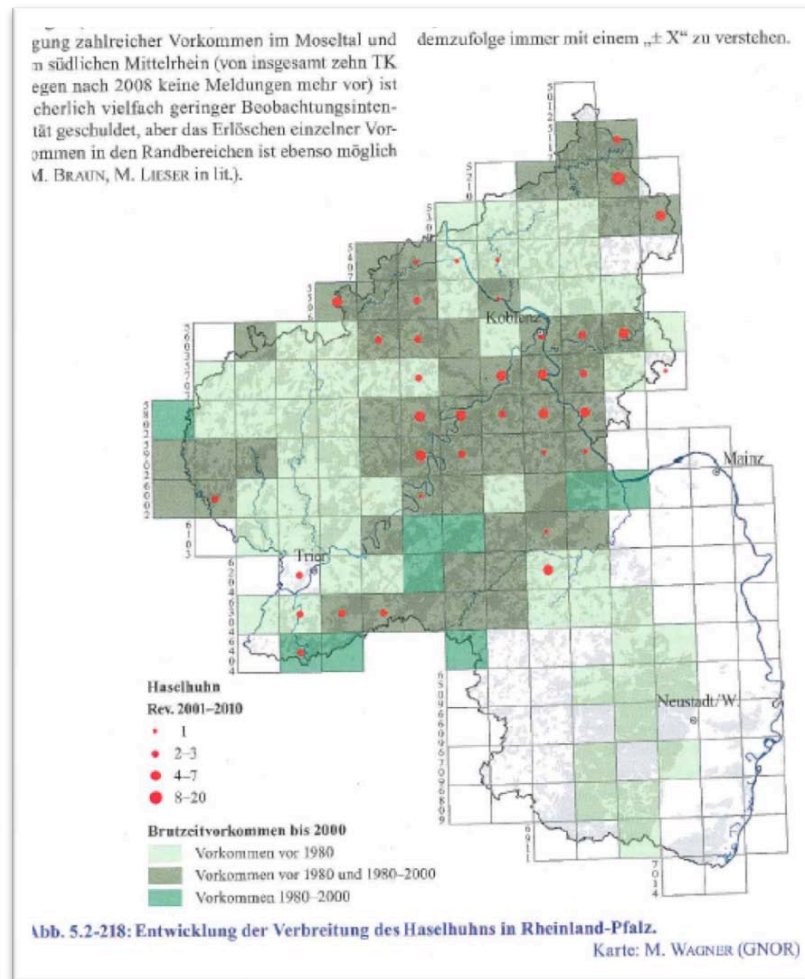
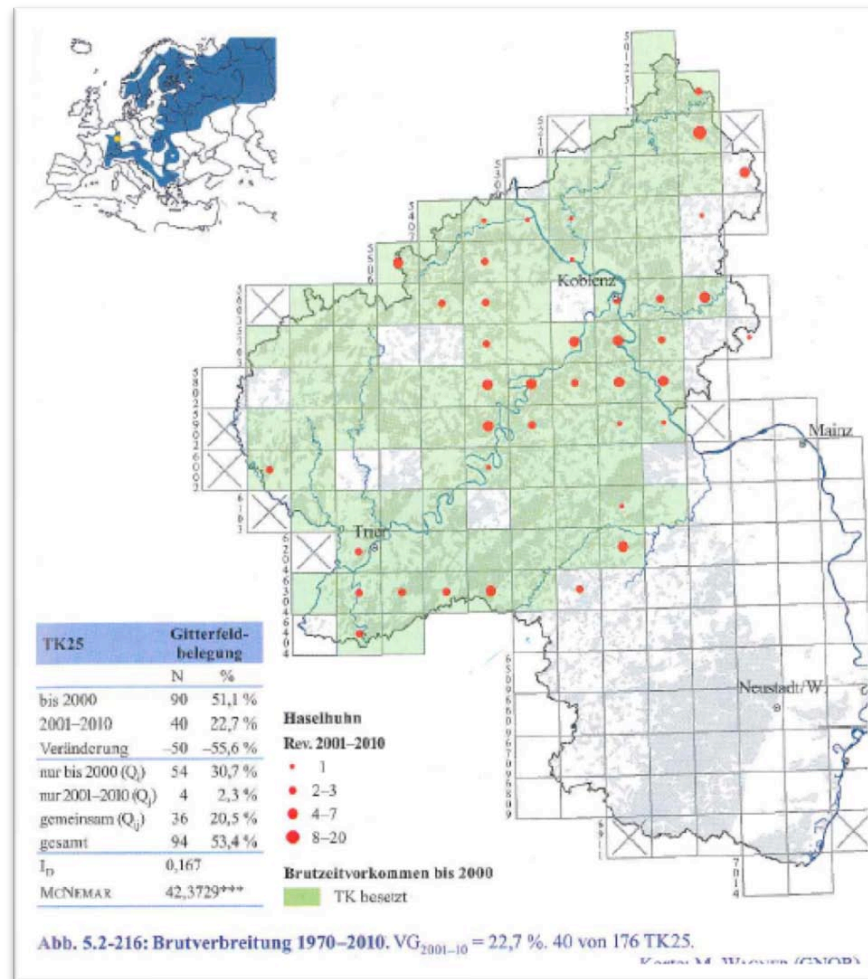
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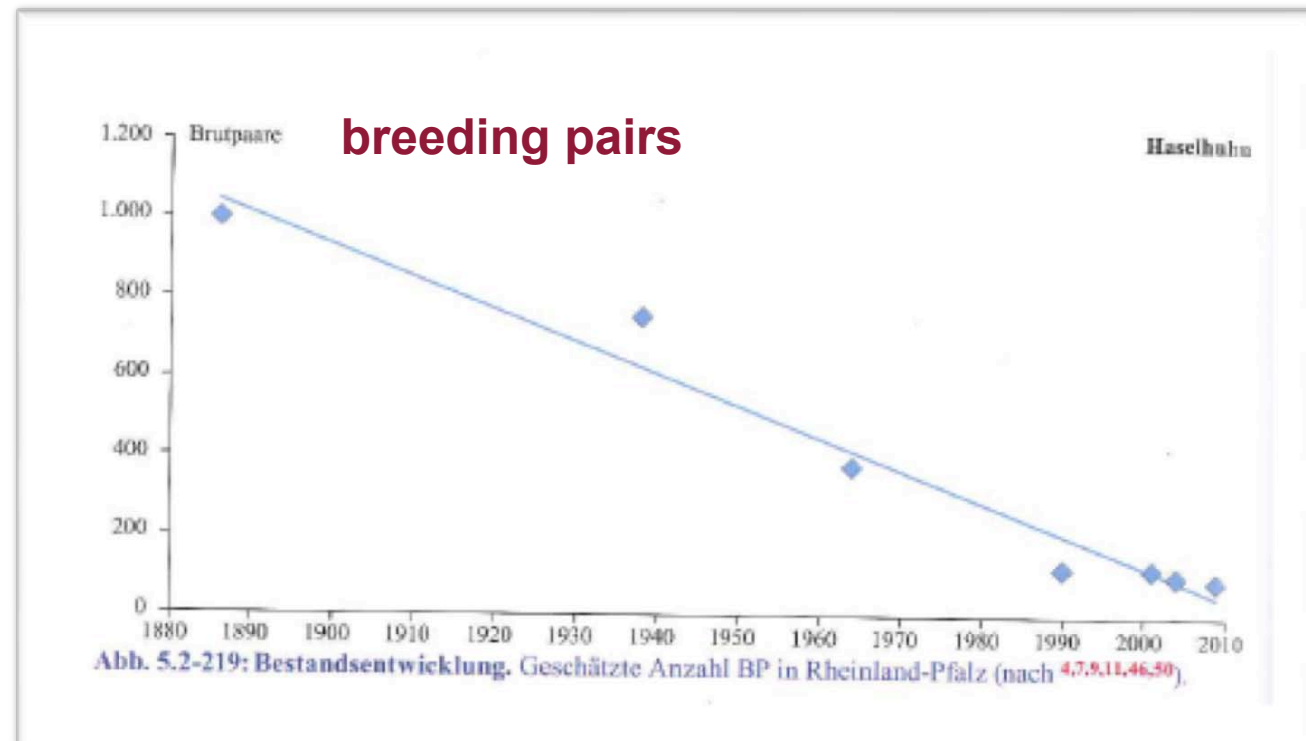
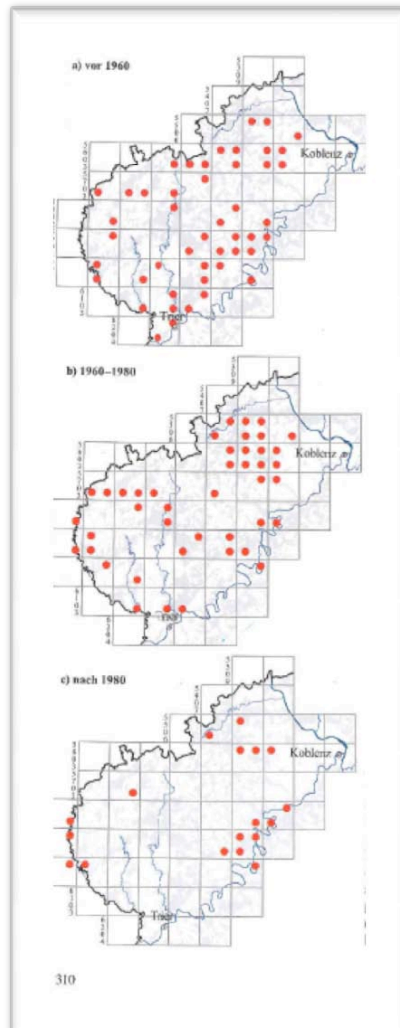
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Development of the population size;
estimated number of hazel grouse in RLP

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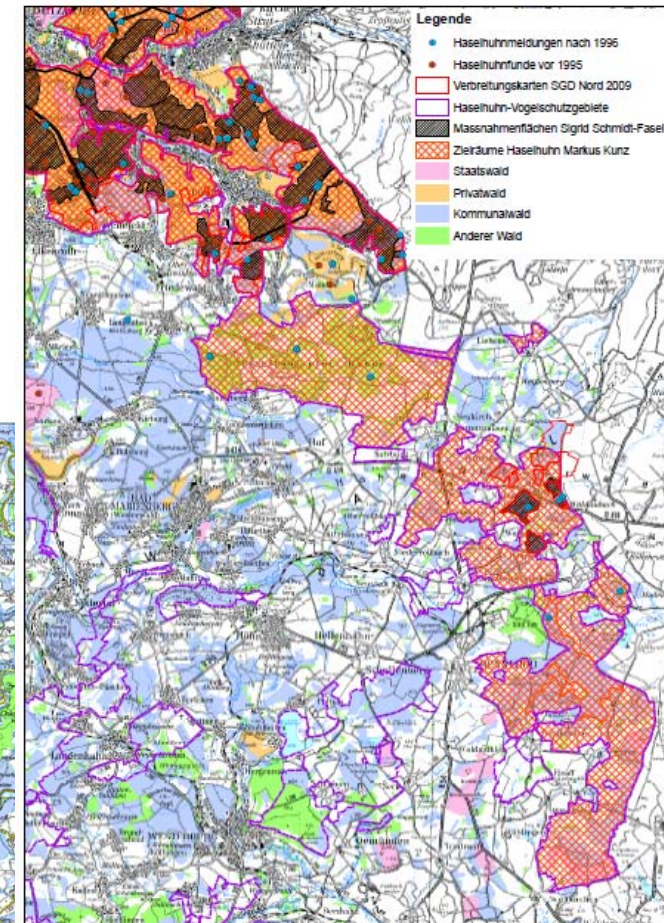
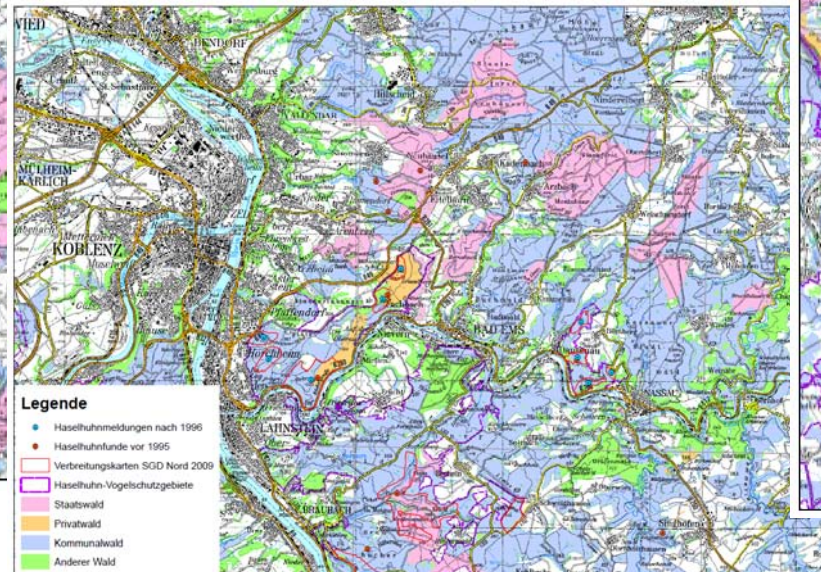
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Distribution of the hazel grouse as exemplified by areas along the Mosel River and the Middle Rhine valleys as well as the Westerwald region





The western sub-species ***Bonasa bonasia rhenana*** is a **regional endemite** mainly distributed in Rhineland-Palatinate. Protective measures for the western hazel grouse are urgently required, since only few individuals survived in our forests (RL RLP: 200-250 pairs, endangered by extinction). The stuffed bird from the Pfalz-Museum was killed in 1935 in the Erlenbach Brook valley (Palatinate Forest). Most probably it is the only specimen of the sub-species in the Palatinate..



Hazards

- Principal cause: it concerns the broad loss or the isolation of suitable forest habitats. In particular stand tending carried out too intensively has a negative effect (comprising selecting felling of coniferous softwood), opening and monotonization of the forests as well as the decrease of coppice forestry.
- disturbances by forest workers as well as by persons walking their dogs;
- nuisance of the stands representing isolated habitats by predators (particularly hawk, brown owl) and egg-feeding animals (boar, fox, marten);
- loss in the off-spring caused by cold and damp weather as a consequence of the increasing Atlantic climatic conditions during the hatching time;
- Browsing by hoofed game may prevent the regeneration of hardwood and damage the diversity of soil vegetation; consequently the habitats get essentially deteriorated;
- flying against forestry culture fencing (wire fences) .



Hazards

- Converting the broad-leaved and mixed forests into pure age-class stands by preferring the profitable Norway spruce or Douglas-fir; abandoning the traditional coppice forestry which leads to the development of the forests and change them from coppice and middle forest into high forest thus resulting in light deficiency and bringing about the elimination of plant and invertebrate species as well as the structures that are vital for the hazel grouse
- Isolation of contiguous hazel grouse populations by forming smaller fractions.
- Reclamation measures by man favor disturbances, e.g. due to the stress on untouched natural forests.
- Wide and straight forest roads associated with lacking hiding cover also bring about an increasing predator stress since the natural enemies of the hazel grouse like hawk and marten prefer scouring waysides which are used by the hazel grouse for sunbathing and sand bathing and for feeding.
- Last but not least the climate change is an essential factor of disturbance.. For the hazel grouse which is well adapted to the Continental climate conditions high mortality rates were found for chilly and damp summer times for the young birds and significant losses in mild winters with high precipitation for the mature birds.

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The Water Management and Trade Supervisory Country Office for the Environment (LfU) deals with the revision of the species protection project hazel grouse (Artenschutzprojekt ASP "Haselhuhn"). This work includes the collection of data on actual evidences resp. clear proofs of hazel grouse followed by cartographic procession.

The hazel grouse sub-species presented here represents an endemic sub-species of local occurrence. For this reason the. country-wide collected droppings, feathers etc. get genetically analyzed by the Senckenberg Institute thus contributing to the protective measures with our specific responsibility.

Moreover, by order of the State Ministry for the Environment (now MUEEF, formerly MULEWF), we elaborate an EU-funding programme on the utilization of coppice forests. We identify focus areas within bird sanctuaries comprising private and community forests by means of forest management planning.

The proposals are accompanied via different actions and projects, carried out e.g. in the administrative district Birkenfeld, in the forest district Bad Sobernheim or by the Country Hunting Association (LJV) in the administrative district Ahrweiler.

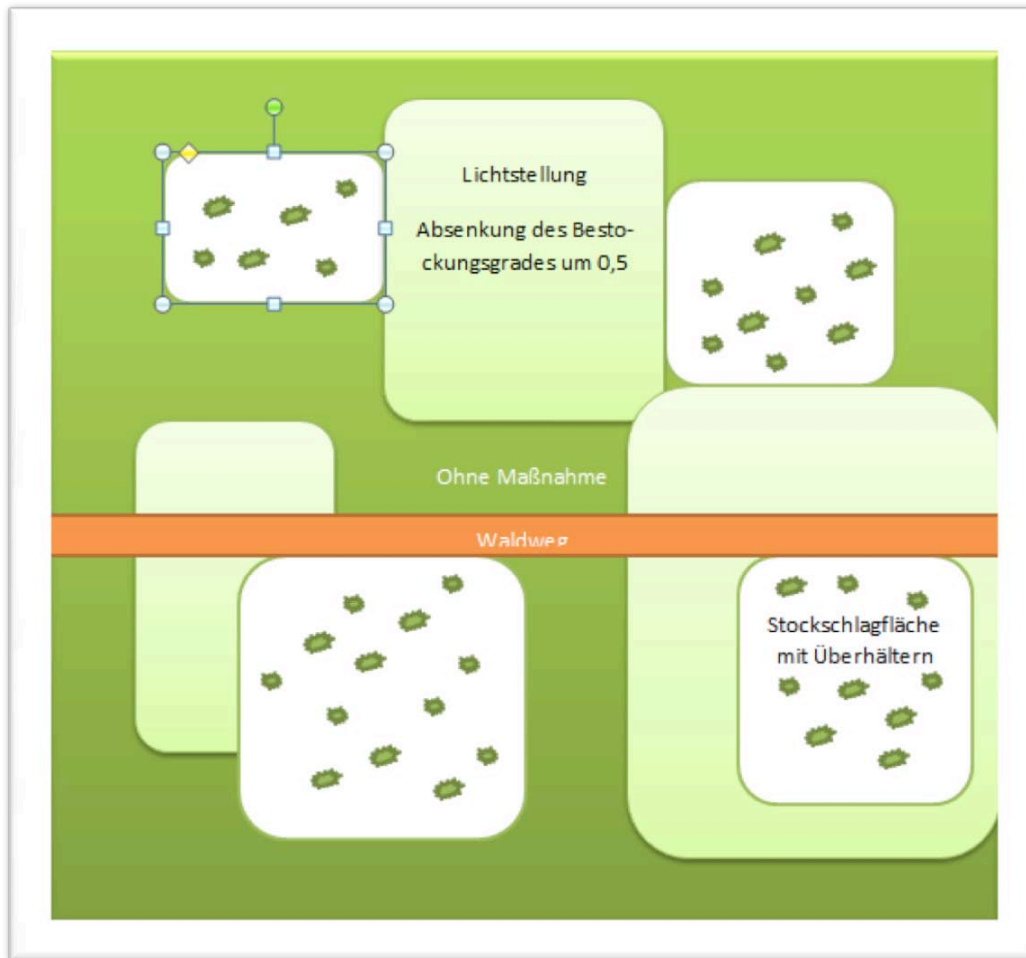




Measures for the hazel grouse

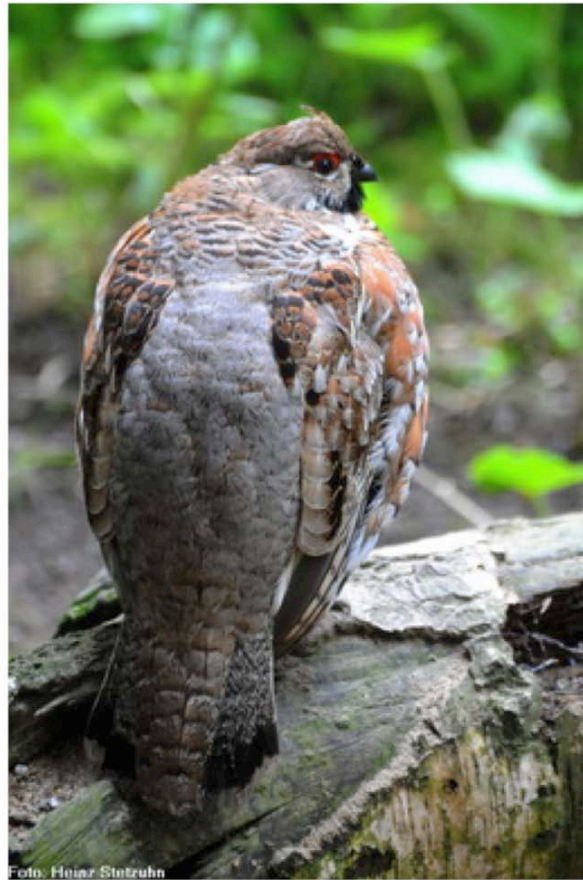
The following description of measures specify the management planning. It is the base of setting up contingency planning of forest regulation of the enterprise plans and assessments for the forest management planner, particularly considering delimitation of the surface areas for carrying out measures, and for the forestry office they serve as an instruction manual for realizing the distinct measures.

The primary habitat conditions include old growth stages that will collapse before long. The emerging gaps and the subsequent growth ensure that a multi-layered structure develops in the forest which is rich in age and species diversity (BERGMANN et al. 1996). The present overall population size in 2012 comprises 200-250 breeding pairs in Rhineland-Palatinate (SIMON et al. 2014) while the focus is on the cross valleys in the northern part of the country.



Concept of the measures:

Generation and development of several mosaic-like intermeshed coppice resp. middle forest cells (minimum size $>0,25-1$ ha) including structure-rich grass-herb and shrub layers and special biotopes (deadwood, rootplates, raw soil patches, mini water spots, etc.) in well-lit, (deciduous) mixed forests with rich strata with older transition areas; age limit of development is 30 years (optimum phase for the hazel grouse: ca. 7-25 years).



Protective measures additionally include partial release cuttings of interior forest areas in the form of so-called “Haselhuhntaschen” (hazel grouse pockets). The increased light incidence into the spaces obtained by this is assumed to improve the quantity of blossoms, thus increasing the animal (insects) and plant (buds *etc.*) nutritional base for the hazel grouse. These new areas however do not only support food consumption, they also form suitable resting spots. Even more sunny and dry spots with open soil will offer potential dust-bathing places.



Recommendations for the protection and the promotion of the species:

- Promoting pioneer forest tree species and coppice structures with plenty softwood trees and shrubs producing berries
- Minimizing forest clearing measures by simultaneously considering interconnecting suitable habitat structures
- Maintaining coppice and middle forests
- Removing coniferous trees planted along brook banks (interconnecting structures)
- Avoiding forest over-clearing measures by setting up intensively developed woodland walks, but maintaining structure-rich, narrow and winding forest paths (sand-bathing and search for food)
- Reducing roe and deer game down to a level that allows natural rejuvenation and species-rich succession without fencing
- Avoiding too high wild boar populations within the hazel grouse habitats
- Giving information to the forest owners and the public on the biology and the protection of the species hazel grouse

Folie 20



Hazel grouse proofs

- applying sound dummies in fall and spring
- searching snow tracks in winter
- looking for traces, settings, feathers
 - along sandy slopes and ways
 - at feeding places
 - in small spruce stands within structure-rich light deciduous stands (e.g. coppice stands)
- safeguarding the characteristics as mentioned before and if possible food residue of predators etc. and forwarding to the Hazel grouse working group (LfU) resp. Senckenberg Institute



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Thank you
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