

Bibliography, GERMANY**Winfried Bücking**

*Most quoted papers relate to several topics. Refer to the list of main topics (page 291). **

AFZ (Allgemeine Forstzeitschrift) (1994): Special issue: Strict forest reserves in Germany. Tasks, targets, management. (Sonderheft: Naturwaldreservate in der Bundesrepublik Deutschland: Aufgaben, Ziele und Betreuung.)

Several authors.

AFZ 49 Special issue [Sonderheft] 11), 560-597.

Abstract: General overviews on state, history, structure, vegetation, faunistic studies, game management in German strict forest reserves.

Key-words: History, biodiversity, stand structure research

Albrecht L. (1990): Basic principles, targets, and methods of ecological research in strict forest reserves in Bavaria. (Grundlagen, Ziele und Methodik der waldökologischen Forschung in Naturwaldreservaten in Bayern 1), 221 pp + annex. Schriftenreihe Bayer. Staatsministerium für Ernährung, Landwirtschaft und Forsten gemeinsam mit dem Lehrstuhl für Landschaftstechnik (München).

Abstract: A review of the scientific background, the targets, the history, the methods of forest reserves research with special attention to Bavaria. Recommendations for standardized survey methods for stand structure, vegetation, fauna. The intensity levels of research should be adapted to the scientific importance of the reserve.

Key-words: Strict forest reserves, forest structure research, biodiversity, stand structure research

BFANL (Bundesforschungsanstalt für Naturschutz und Landschaftsökologie) (1991): Strict Natural Forest Reserves (Naturwaldreservate). Schriftenreihe f. Vegetationskunde 21, 247 pp.

Abstract: Scientific papers of the workshop on Strict Forest Reserves, held in Bonn, April 1989, supplemented by some actual papers from the new (eastern) states of the Federal Republic of Germany. Overview of methods especially of stand structure and phanerogamic vegetation research. Mycological studies. Site, soil, and atmospheric deposition studies. Sivicultural applications.

Key-words: Biodiversity, mycology, monitoring

BFN (Federal Agency of Nature Protection, Bundesamt für Naturschutz)(1997): Statistical data of Nature (Daten zur Natur) 170 p. Münster (Landwirtschaftsverlag)

Abstract: Statistical surveys, definitions, legal background of nature conservation in Germany

Key-words: Statistics of nature conservation

Bücking W. (1997): Natural Forests, Strict Forest Reserves, Wilderness Areas in Germany and in Europe. (Naturwald, Naturwaldreservate, Wildnis in Deutschland und Europa) Forst+Holz 51, 1-8.

Abstract: Report on actual state and statistics of forest areas dedicated to free development in Germany and public discussion on the need of wilderness areas. Reference to international activities.

Key-words: History, strict forest reserves vs. wilderness areas

Bücking W. (scientific coordination) (1998): Faunistic studies in 6 strict forest reserves of Baden-Württemberg, South West Germany. Xylobiontic beetles, carabids, birds (Faunistische Untersuchungen in Bannwäldern. Holzbewohnende Käfer, Laufkäfer und Vögel) Mitteilungen der Forstl. Versuchs- u. Forschungsanstalt Bad.-Württ. 203, 271pp.

Short version: Faunal structures of some strict forest reserves compared to commercial forests. Six case studies in Baden-Württemberg of xylobiontic beetles, groundbeetles, birds (Faunenstrukturen einiger Bannwälder und vergleichbarer Wirtschaftswälder. Sechs Fallstudien in Baden-Württemberg zu Totholzkäfern, Laufkäfern, Vögeln). Mitteilungen Verein Forstl. Standortkunde Forstpflanzenzüchtung 39 (1998), 109-123.

Abstract: Beetles inhabiting woody-debris, ground beetles, and birds were qualitatively and quantitatively compared in six natural forest reserves and managed forests. The reserves and managed stands were comparable in tree species composition and site conditions; the managed stands differed in the amount of woody debris present due to management practices. The forests were distributed along a gradient of climatic zones from low to high elevation (Oak-Hornbeam Forest; Oak-Beech Forest; Beech-Silver Fir Forest). Overall, 372 woody-debris beetles, 119 ground-beetle species, and 65 bird species were observed. Animal communities were compared within a given climatic zone and within stands of the same dominant tree species for both natural reserve and managed forests. The animal communities were relatively similar statistically (using Sörensen- and Renkonen's indices). In the natural preserve forests (trees not cut for the last 25 to 80 years), the breeding-bird population and the total number of all birds and that of beetles inhabiting woody debris was typically higher. This relationship is explained by the more diverse vertical forest structure and the greater amount of woody debris of specific species which encourage specialized birds and beetles.

Key-words: Stand structure, biodiversity of xylobiontic beetles, ground beetles, birds

Dieterich H., Müller S., Schlenker G. (1970): Virgin forest of tomorrow. Strict forest reserves of the State Forest Administration of Baden-Württemberg. (Urwald von morgen. Bannwaldgebiete der Landesforstverwaltung Baden-Württemberg) 174 p. Stuttgart (Ulmer).

Abstract: Scientific background, history, and description of 40 strict forest reserves in Baden-Württemberg, realized in the nature conservation year 1970. Famous because of the slogan „virgin forests of tomorrow“.

Key-words: Virgin forest of tomorrow, strict forest reserves

Dorow W. H. O., Flechtner G., Kopelke J.-P. (1992): Concept of Faunistic research (Zoologische Untersuchungen. Konzept). Naturwaldreservate in Hessen vol. 3 (part of Mitt. Hess. Landesforstverwaltung, vol. 26), 159 pp.

Abstract: Methodological studies of faunistic research in natural forests and recommendations for a comprehensive long-time research in Hessia.

Key-words: Faunistic monitoring, faunistic biodiversity, faunistic methodology

Grosser K.H. (1997): Silvicultural Research in Natural Forests and Strict Forest Reserves in Brandenburg (Waldkunde und Naturwaldreservate in Brandenburg). Beiträge für Forstwirtschaft und Landschaftsökologie 31, 49-54

Abstract: Establishment of natural forest reserves in Brandenburg since 1934 was stimulated at first by silvicultural needs and forest science and later on by nature conservation. The scientific background and the history of the forest reserve management in the eastern German states is depicted.

Key-words: History of strict forest reserves, silvicultural research, strict forest reserves in Brandenburg

Kärcher R., Weber J., Baritz R., Förster M., Song X. (1997): Inventory of Forest Structures. Manual for the Field Survey of Protected Forests in Baden-Württemberg, South-West Germany (Aufnahme von Waldstrukturen. Arbeitsanleitung für Waldschutzgebiete in Baden-Württemberg). Mitt. Forstl. Versuchs- u. Forschungsanstalt Bad.-Württ. 199, 64 p.

Abstract: Field Manual for the plot design, structure assessments of standing biomass, dead wood component, electronic data handling in the regional strict forest reserves of Baden-Württemberg.

Key-words: Forest structure, assessment design

Meuthen D., Wolf G. (1990): Strict forest reserves. Bibliography. (Naturwaldreservate. Bibliographie 63). Dokumentation Natur und Landschaft 31 (BFNL[Bundesanstalt für Naturschutz und Landschaftsökologie]), 109 pp.

Abstract: Regularly updated bibliography of publications, documentations, scientific papers, theses etc. dealing with or having been executed in strict forest reserves of the different Länder of Germany. References to important papers from European countries.

Key-words: Bibliography

Meyer P. (1999): Dead wood research in reserves of Northwest-Germany: methodology and results. (Totholzuntersuchungen in nordwestdeutschen Naturwäldern: Methodik und erste Ergebnisse) Forstwiss. Centralblatt 118, 167-180

Abstract: Methodology of dead wood assessment and dead wood volume calculation in the Land Lower Saxony is presented. Results of one hectare core areas in seven beech forest reserves show that dead wood debris varies between 9 and 79 m³ per ha after a period free from management of 19 to 25 years. Most dead wood debris are lying trunks >20 cm DBH. Mortality proved to be generated by exogeneous factors. A strategy for enrichment of dead wood material in managed forests should therefore include disturbance mortality.

Key-words: Dynamics of dead wood component, dead wood assessment

Natur und Landschaft (1980, 1989): Strict forest reserves in the federal republic of Germany. Special issues (Naturwaldreservate in der Bundesrepublik Deutschland. Sonderhefte) Natur und Landschaft (1980): 131-161; 64 (1989): 547-591

Abstract: Short reports on two national workshops on stand of realization, organization and research of strict forest reserves in the Western Federal States. Several methodological and scientific contributions to stand structure, vegetation and site studies.

Key-words: Strict forest reserves, stand structure research, vegetation science

NNA (Norddeutsche Naturschutzakademie) (eds) (1991): Natural forests in Lower Saxonia – relevance, management, research (Naturwälder in Niedersachsen - Bedeutung, Behandlung, Erforschung)

NNA Berichte 4, H. 2, 80 pp. Schneverdingen.

Abstract: Overview on Strict Forests (Naturwald, Nature Forest), stand structure research and management problems in the Federal State of Lower Saxony.

Key-words: Strict forest reserves of Lower Saxony, research in strict forest reserves, management in strict forest reserves

NUA (Natur- und Umweltschutz-Akademie des Landes Nordrhein-Westfalen) (ed.) (1999): Strict Forest Reserves in beech forests – virgin forests of tomorrow. (Buchennaturwald-Reservate – unsere Urwälder von morgen)

NUA-Seminarbericht vol. 4, 316 pp. Recklinghausen

Abstract: This volume reports on the progress on multidiscipline research results in setting up new reserves and strict forest reserves (stand structure, biodiversity of dead flora, fungi, and fauna). Much attention is paid to the comparison of unmanaged and managed forests with regard to the fauna of the tree crown compartment and the soil surface compartment. Political and socioeconomic implications of strict forest reserves establishment and research are largely discussed. The volume contains 22 original papers and 13 posters and excursion reports presented at a workshop which continues the traditional former Forest Reserves Workshops

organized by the Federal Institute of Nature Conservation and Landscape Management (Bundesforschungsanstalt für Naturschutz und Landschaftsökologie - BFANL).

Key-words: Strict forest reserves in Germany, stand structure, dead woody debris, biodiversity of flora, fauna, fungi

Projektgruppe Naturwaldreservate im Arbeitskreis Standortkartierung der Arbeitsgemeinschaft Forsteinrichtung (1993): Recommendations for installation and management of strict forest reserves in Germany (Empfehlungen für die Einrichtung und Betreuung von Naturwaldreservaten in Deutschland) Forstarchiv 64,122-129.

Abstract: Land research rules for installation, management of strict forest reserves as defined by the national working group Strict Forest Reserves.

Key-words: Forest reserves network, structure inventory

Thomas A.; Mrotzek R.; Schmidt W. (1995): Biomonitoring in close to nature beech forests. Tasks, methods, organization of a coordinated biomonitoring system in near nature forest ecosystems of the Federal Republic of Germany. (Biomonitoring in naturnahen Buchenwäldern. Aufgaben, Methoden und Organisation eines koordinierten Biomonitoringsystems in naturnahen Waldökosystemen der Bundesrepublik Deutschland) BfN-Abschlußbericht, Angewandte Landschaftsökologie 6, 151 pp. Bonn-Bad Godesberg.

Abstract: A country-wide representative net of 25 beech forest reserves to be monitored for a long time is proposed. The project's objective is to study slow changes within the ecosystems, caused by direct or indirect human impact. Standardized parameters and methodologies will be mostly descriptive and include stand structure, elements of vegetation and fauna, soil. The costs are calculated and the organisation structure is discussed.

Key-words: Monitoring, ecosystem change, methods of survey, methods of monitoring

Wilmanns O. (1977): On forest preserves in the German Federal Republic. *Naturaliste Can.* 104, 175-180

Abstract: In West-Germany a network of forest stands which includes if possible examples of all forest types is being established. All direct and indirect human activities are prohibited except hunting. Their significance for general and applied science, for conservation of species and for men's moral enrichment is pointed out. Special syndynamical problems are met in Central Europe because of woodland grazing in former centuries. The first step in the research is a thorough documentation, especially phytosociological mapping.

Key-words: Strict forest reserves, phytosociological importance, forest history in Europe

Winter K. (ed.) (1999): Programme for faunistic study of natural forests. (Programm zur Untersuchung der Fauna in Naturwäldern) IHW Verlag Eching bei München, 61 pp., ISBN 3-930167-36-0.

Abstract: Proposal for a minimum programme of faunistic research and monitoring in forest reserves, recommendation of standardized methods. Worked out by a task group of experts in the frame of the national coordination committee „Strict Forest Reserves“.

Minimum programme of faunistic research.

Key-words: Fauna biodiversity research methods

Publication series of the different states of the Federal republic of Germany: Results of case studies, reports, inventories of specific and single strict forest reserves. Baden-Württemberg (Waldschutzgebiete, Mitteilungen der Forstlichen-Versuchs- und Forschungsanstalt Baden-Württemberg)

Bavaria (Naturwaldreservate in Bayern. Schriftenreihe Bayerisches Staatsministerium für Ernährung, Landwirtschaft und Forsten gemeinsam mit dem Lehrstuhl für Landschaftstechnik)

Hesse (Naturwaldreservate in Hessen. Mitteilungen der Hessischen Landesforstverwaltung)

North Rhine-Westphalia (Naturwaldzellen. Schriftenreihe der Landesanstalt für Ökologie, Landschaftsentwicklung und Forstplanung Nordrhein-Westfalen).

Rhine-Palatinate (Naturwaldreservate in Rheinland-Pfalz. Mitteilungen aus der Forstlichen Versuchsanstalt Rheinland -Pfalz)

*Main topics:

<u>Historical perspectives and milestones in the research</u>	Projektgruppe 1993
AFZ 1994	Kaercher et al. 1997
Albrecht 1990	Meyer 1999
Bücking 1997	Natur und Landschaft 1980,1989
Dieterich et al. 1970	NNA 1991
Großer 1997	Thomas et al. 1995
NUA 1999	<u>Biodiversity</u>
<u>Vegetation Science, Site studies</u>	AFZ 1994
BFANL 1991	Albrecht 1990
Dieterich et al. 1970	BFANL 1991
Natur und Landschaft 1980,1989	Dorow et al. 1992
NUA 1999	Natur und Landschaft 1980,1989
Wilmanns 1997	NUA 1999
<u>Stand structure research, gap dynamics</u>	Winter (1999)
Albrecht 1990	<u>Fauna</u>
BFANL 1991	AFZ 1994
Dorow et al. 1992	Buecking 1998
NUA 1999	Projektgruppe1993
Winter (1999)	<u>Applications to managed forests</u>
<u>Methods of biodiversity research</u>	BFANL 1991
Dorow et al. 1992	NNA 1991
Thomas et al. 1995	NUA 1999
Projektgruppe 1993	<u>Bibliographies</u>
Thomas et al. 1995	AFZ 1994
<u>Management of strict forest reserves</u>	Bücking 1997
NNA 1991	Meuthen & Wolf 1990
	NUA 1999