

#### 4. Wissenschaftliches Symposium, Steigerwaldzentrum

Natur- und Artenschutz bei integrativer  
Waldbewirtschaftung

## Die ABC-Grad-Buchenversuchsflächen im Steigerwald. Ein ertragskundliches Eldorado

Enno Uhl und Hans Pretzsch,  
Lehrstuhl für Waldwachstumskunde,  
Technische Universität München

- 1 Geschichte der Flächen
- 2 Wachstumstrends
- 3 Soziale Drift
- 4 Epigenetische Forschung



W. L. Pfeil  
\*1783 †1859

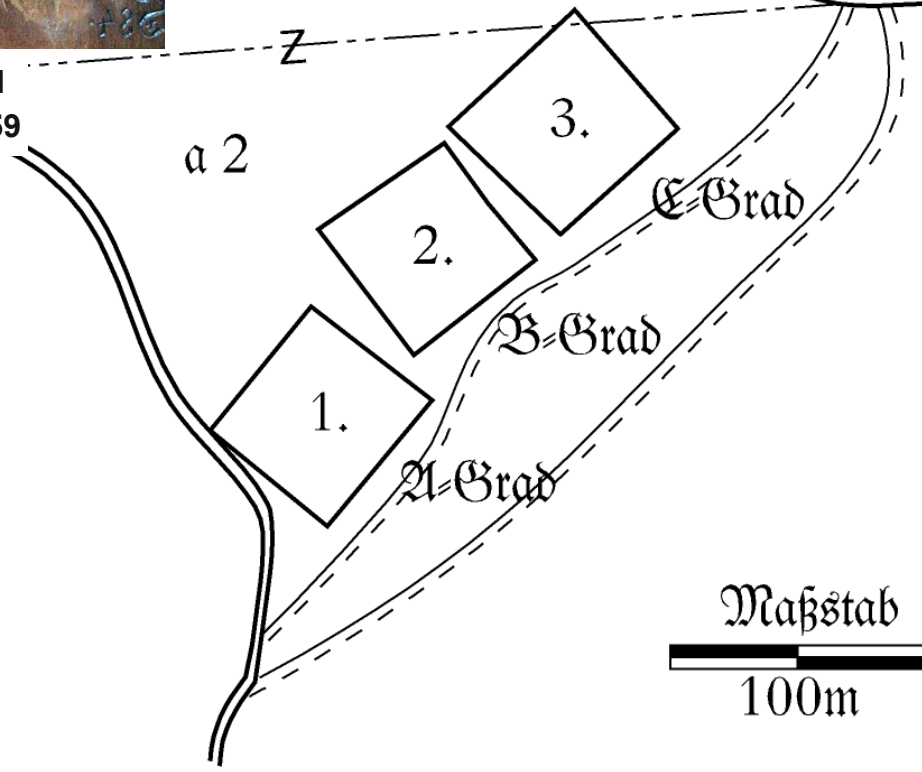
# Durchforstungsversuch Fabrikerschleichach Situationsplan 1870

manner Strasse

Abt. 4  
Köthenhang

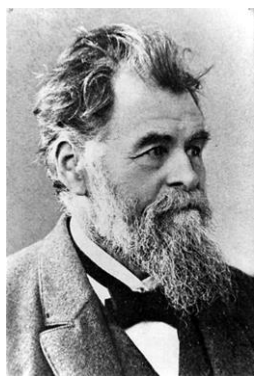
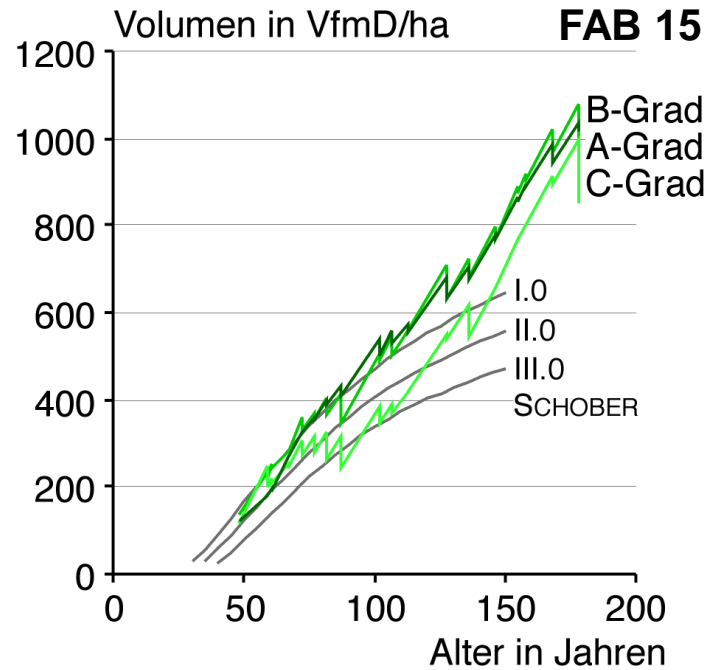


B. Danckelmann  
\*1831 †1901

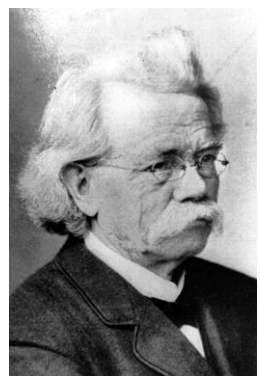




# Langlebige Organismen brauchen langfristige Messung



A. v. Ganghofer  
\*1827 †1900



F. v. Baur  
1878-1897



R. Weber  
1897-1905



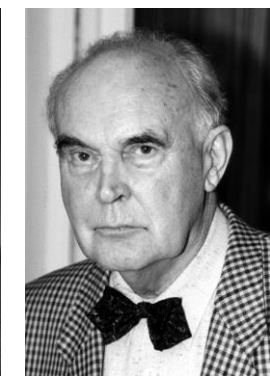
V. Schüpfer  
1905-1937



K. Vanselow  
1937-1951

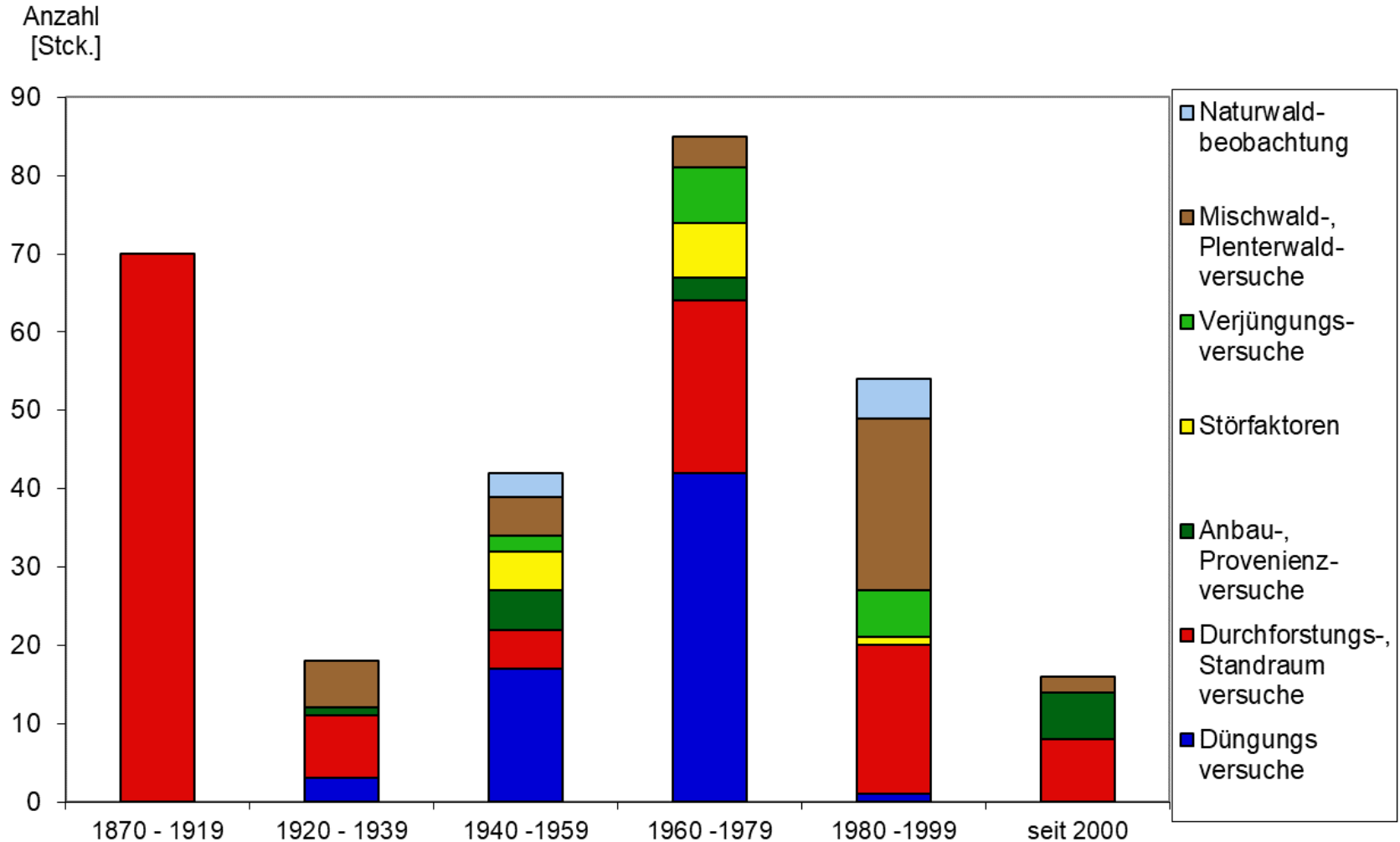


E. Assmann  
1951-1972

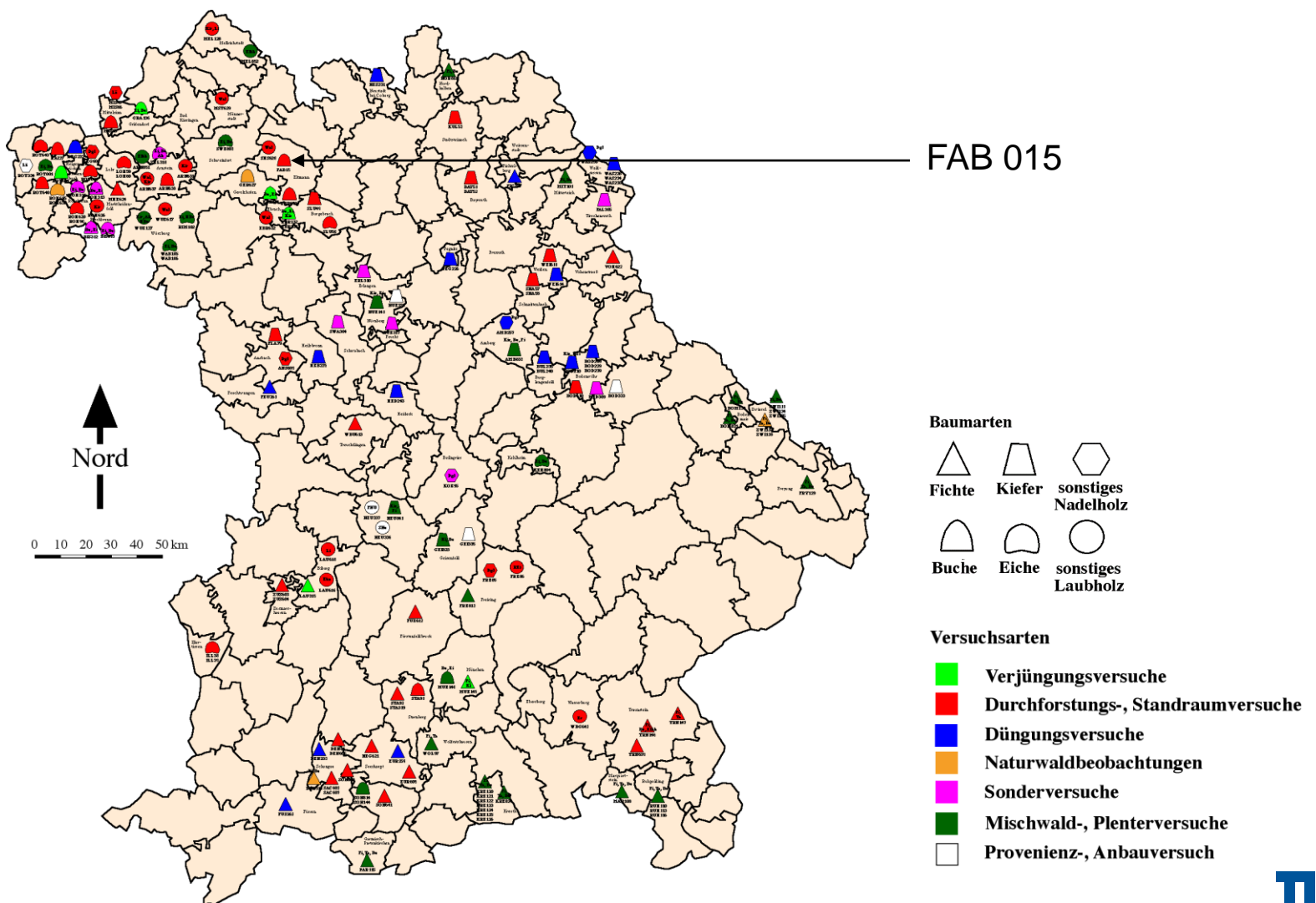


F. Franz  
1972-1993

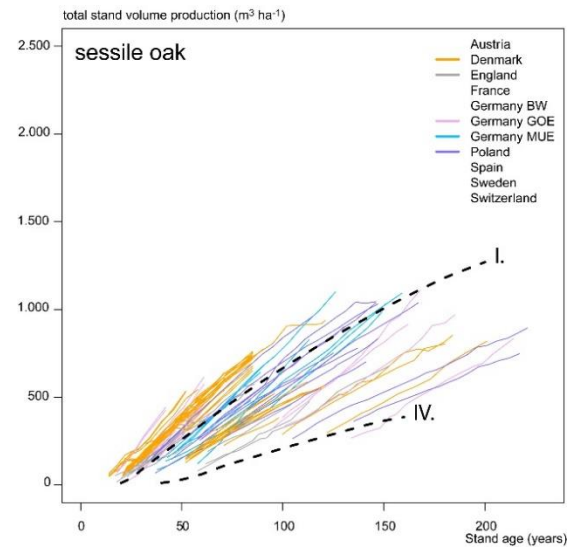
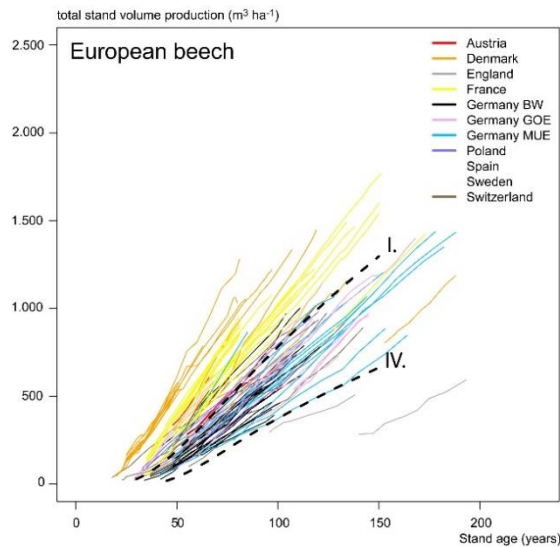
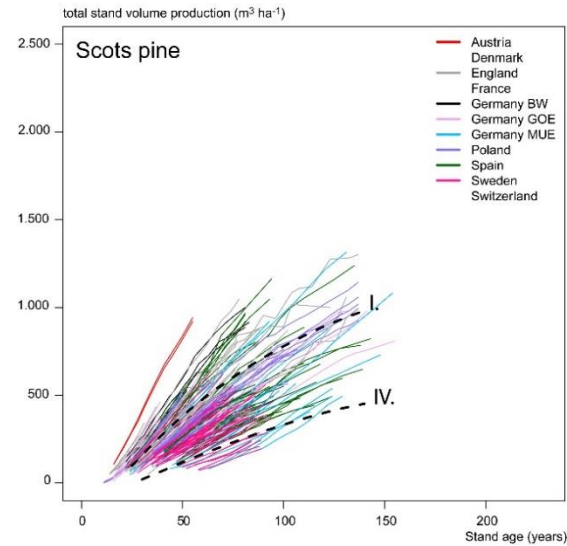
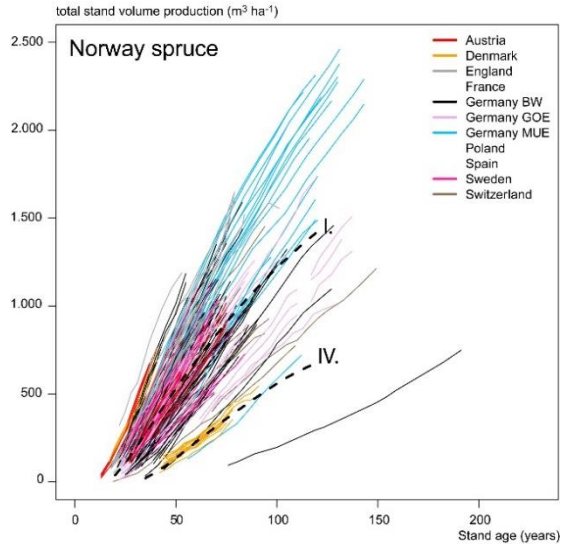
# Phasen der Anlage langfristiger Versuche in Bayern



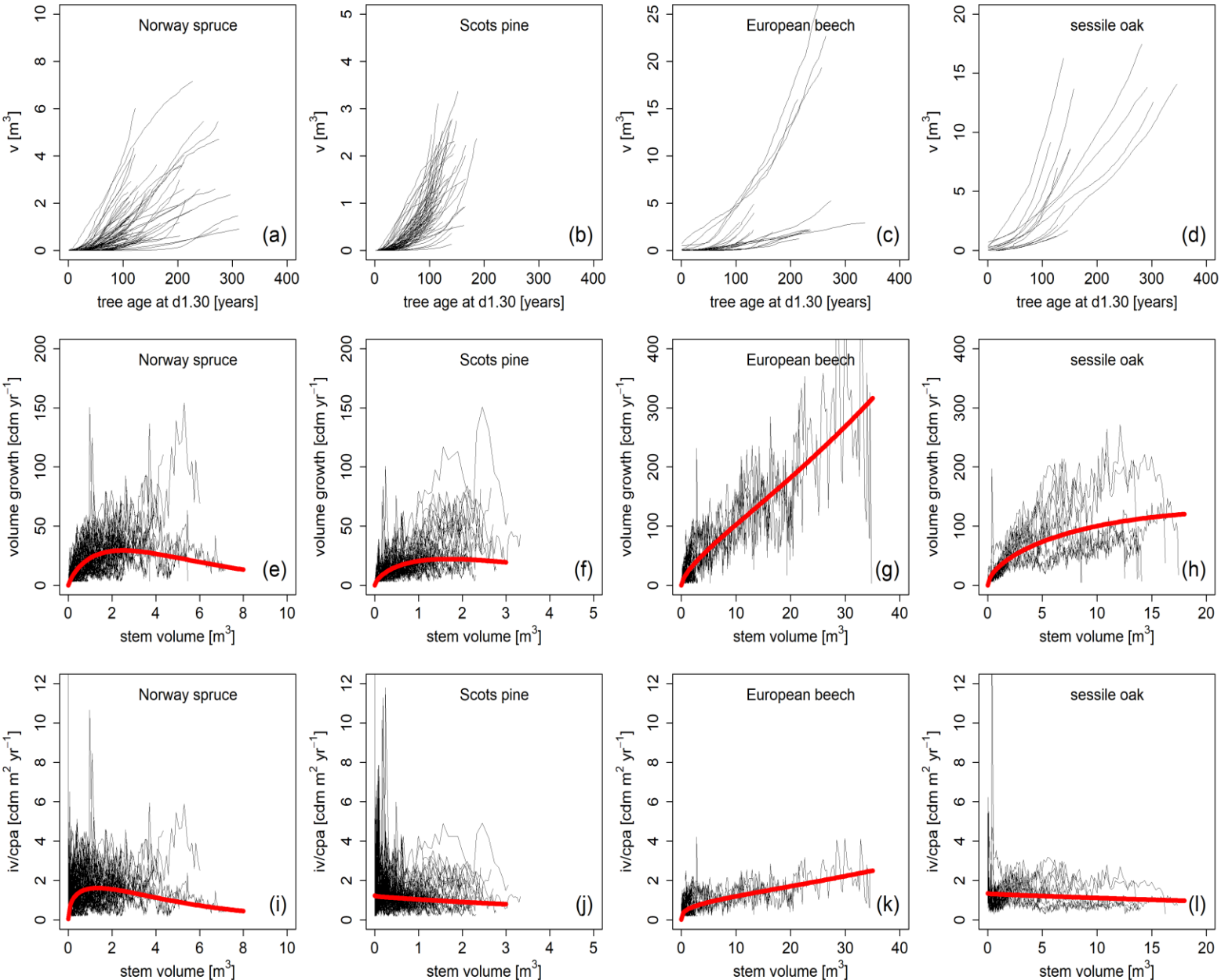
# Das Netzwerk an langfristigen ertragskundlichen Versuchsflächen in Bayern



# Spektrum des Wachstums: Gesamtwuchsleistung

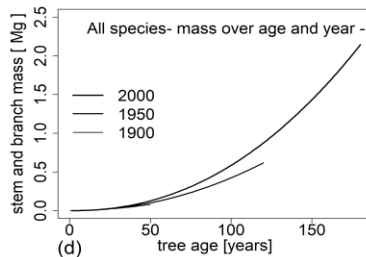
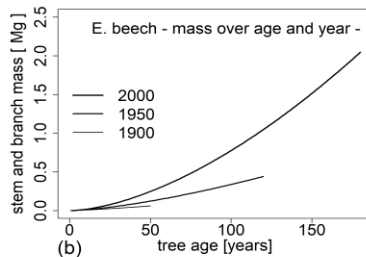
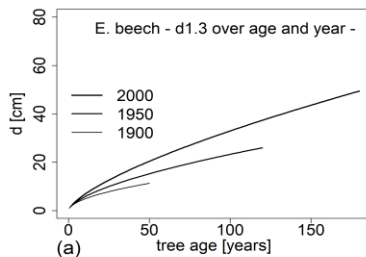
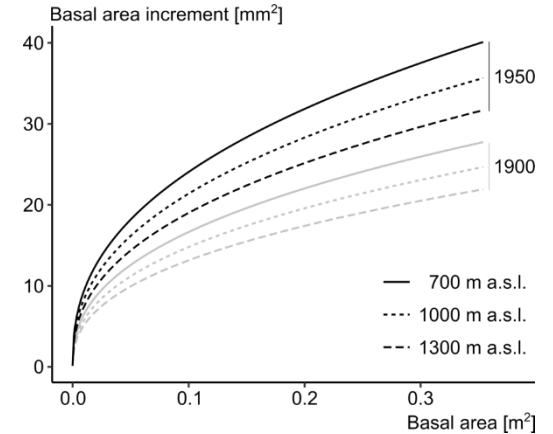
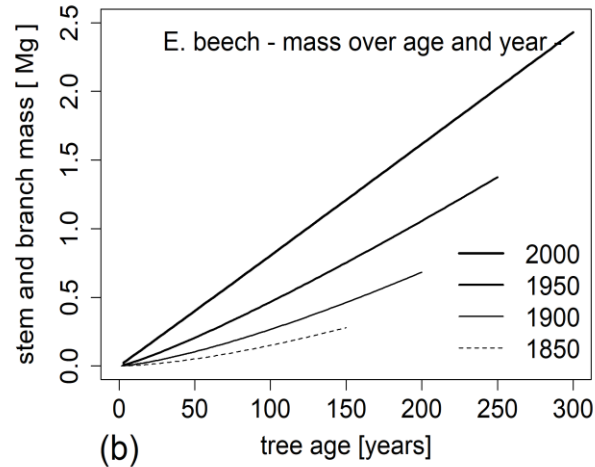
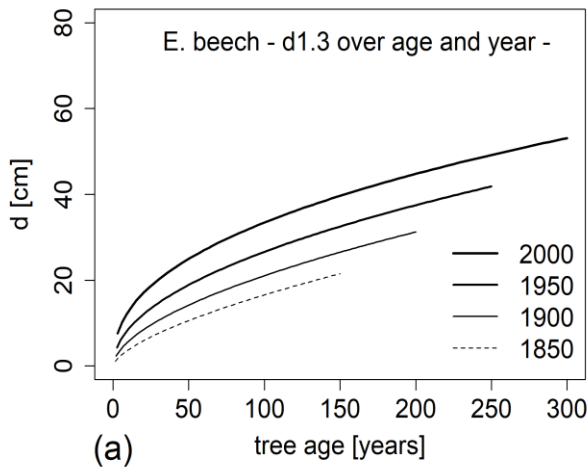


# Langfristiger Wachstumsgang



Pretzsch (2020)  
The course of  
tree growth.  
Theory and  
reality, Forst  
Ecology and  
Management,  
478, 118508.

# Wachstumsgang der Buche. Zuwachsbohrung und langfristige Versuchsflächen

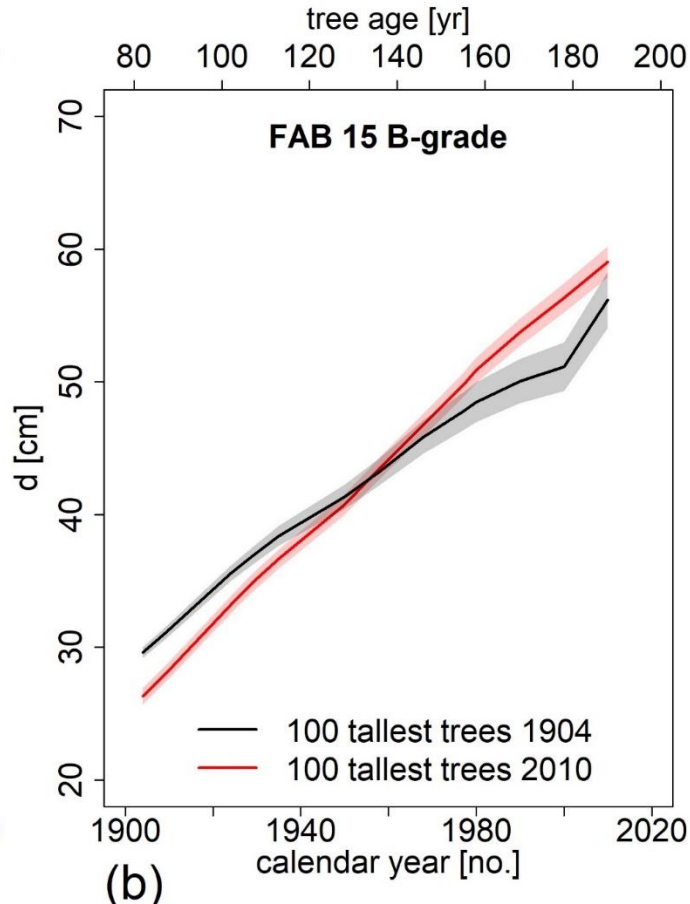
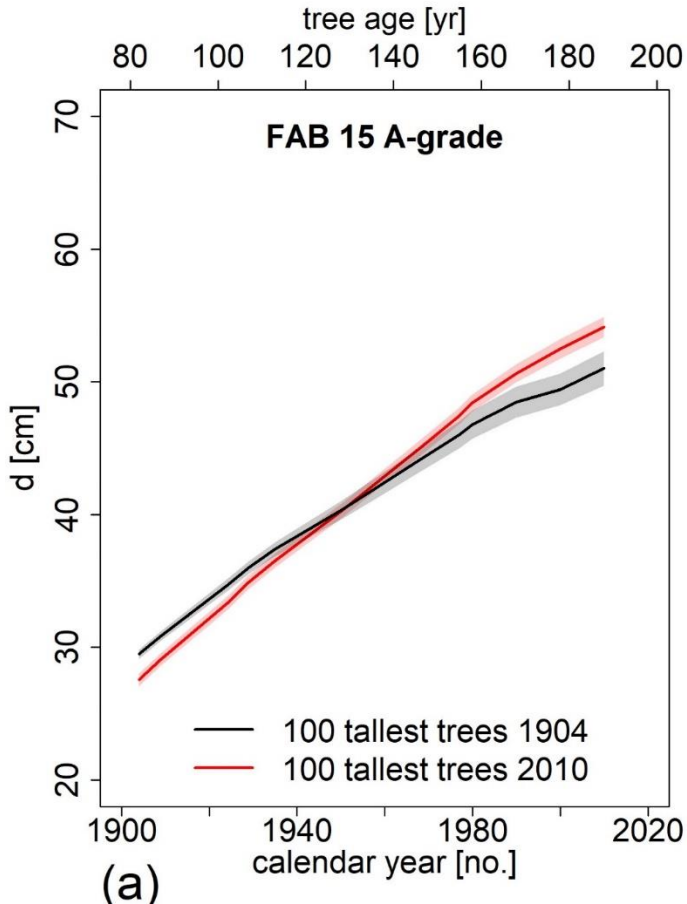


Pretzsch (2020) The course of tree growth. Theory and reality, Forest Ecology and Management, 478, 118508.

Uhl et al. (In preparation) Evidence of changing growth dynamics of *Fagus sylvatica* L. in mono-specific mountain forests regions across Europe.



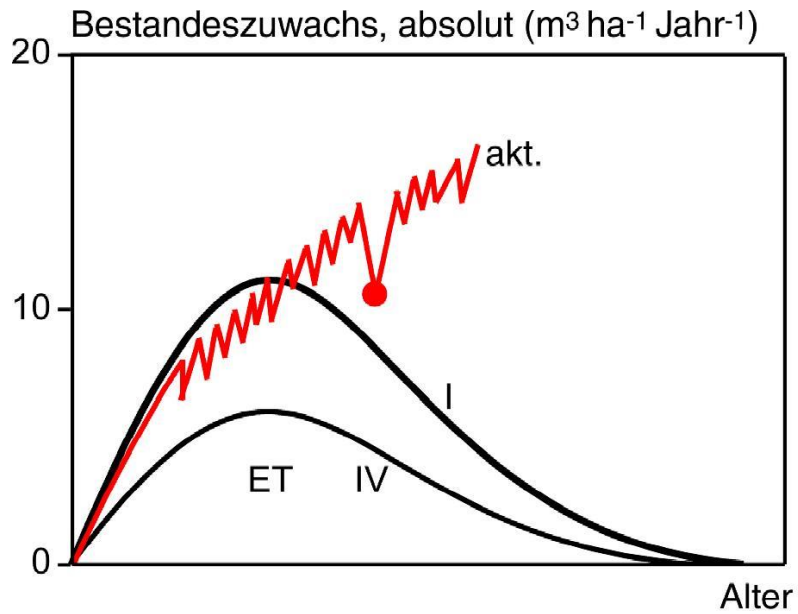
## Umsetzen – survivor bias



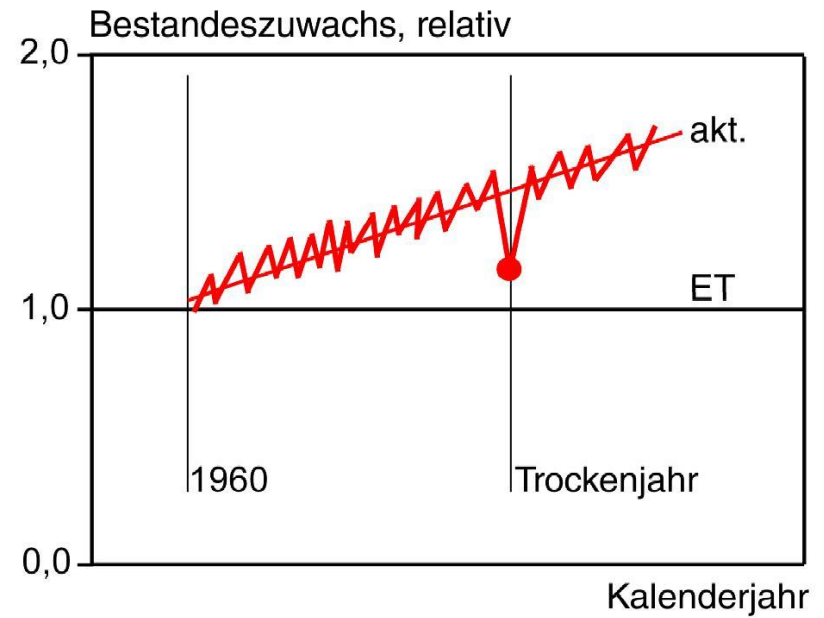
Mögliche Überschätzung  
des Wachstumstrends  
um 10-20 %.  
Dennoch verbleibt eine  
Zunahme des  
Wachstums um 40%,  
wenn die festgestellte  
Wachstumszunahme  
von 60% bei der Buche  
entsprechend reduziert  
wird.

Pretzsch, H. (2021). The social drift of trees. Consequence for growth trend detection, stand dynamics, and silviculture. European Journal of Forest Research, 1-17.

# Niveau und Trend. Ergebnisse. Stressreaktion

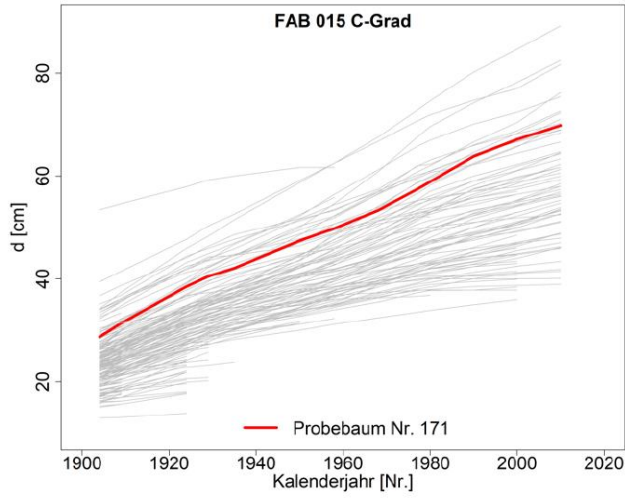
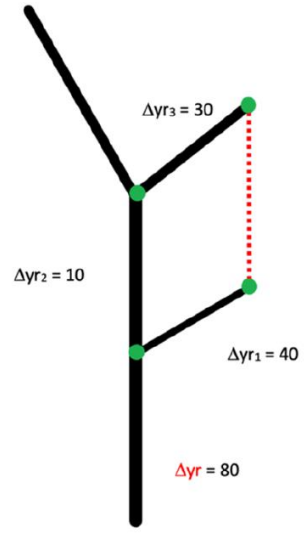
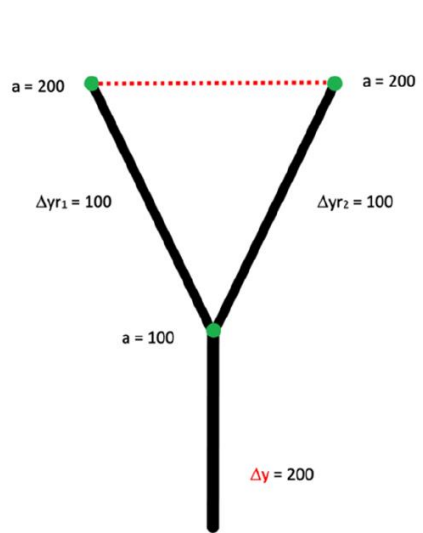
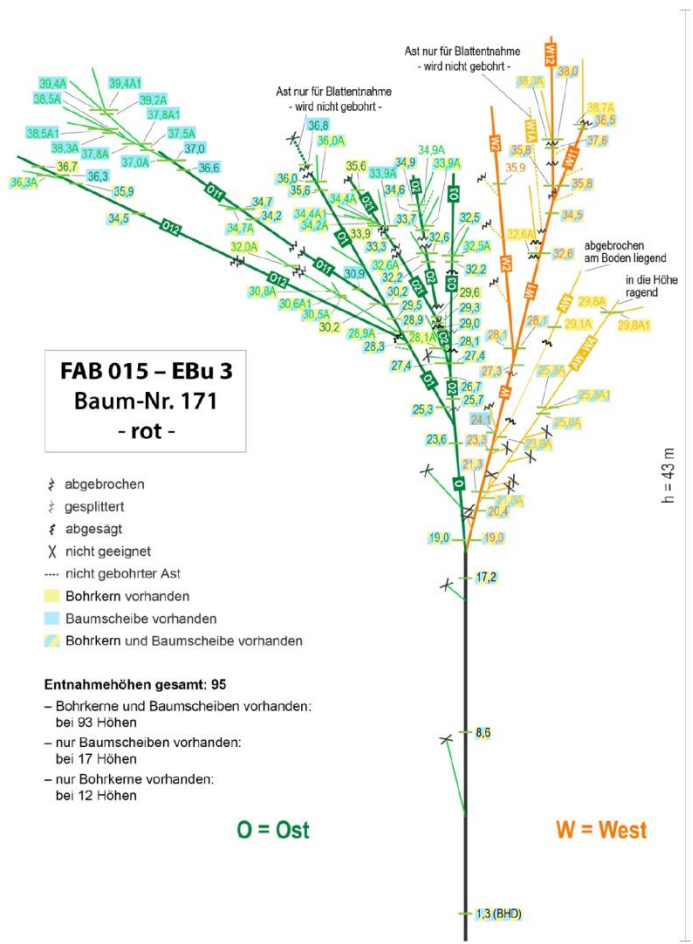


(a)



(b)

# Untersuchungen zur epigenetischen Anpassung



## Zusammenfassung und Ausblick

- Langfristige Organismen brauchen langfristige Messung
- Nachweis für den Fussabdruck des Menschen
- Waldbauliche Erkenntnisse
- Plattform für innovative Forschung auf quantitativer Basis

150 Jahre Kontinuität

