

Inventory in the Białowieża Forest

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Białowieża Forest — habitats before outbreak of the *Ips typographus*



fot. P. Fabijański (2)



fot. M. Taradejna

Habitat response to outbreak and low groundwater levels



Białowieża Forest today



fot. M. Taradejna



fot. P. Artych



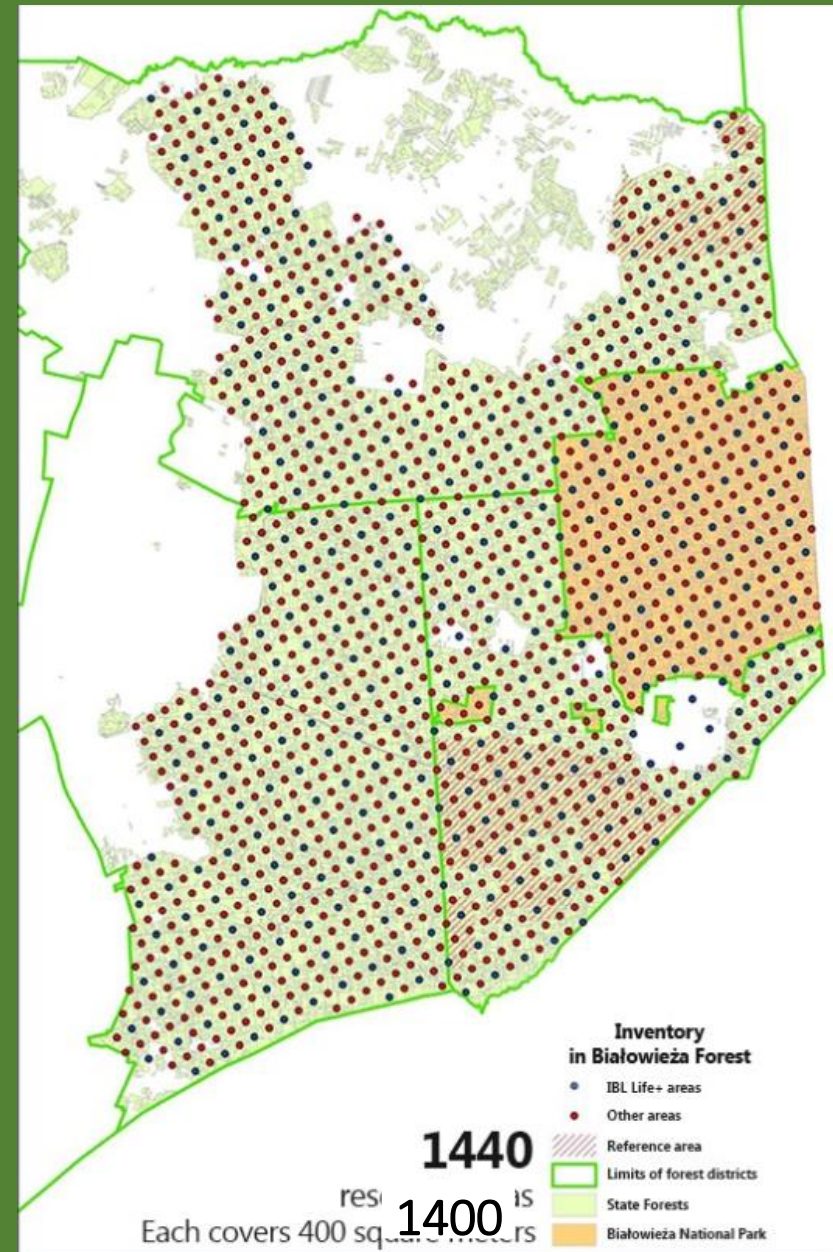
fot. M. Taradejna



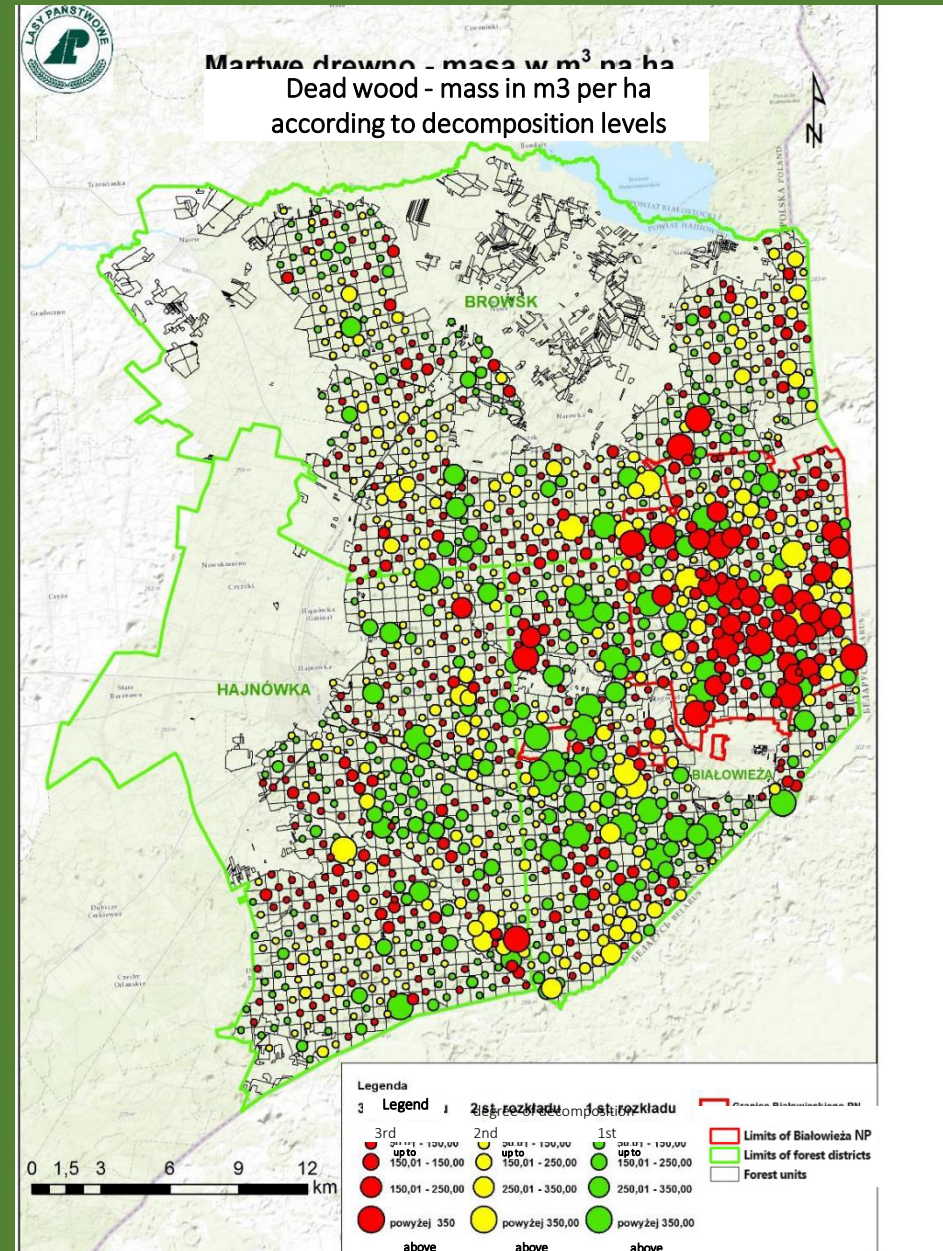
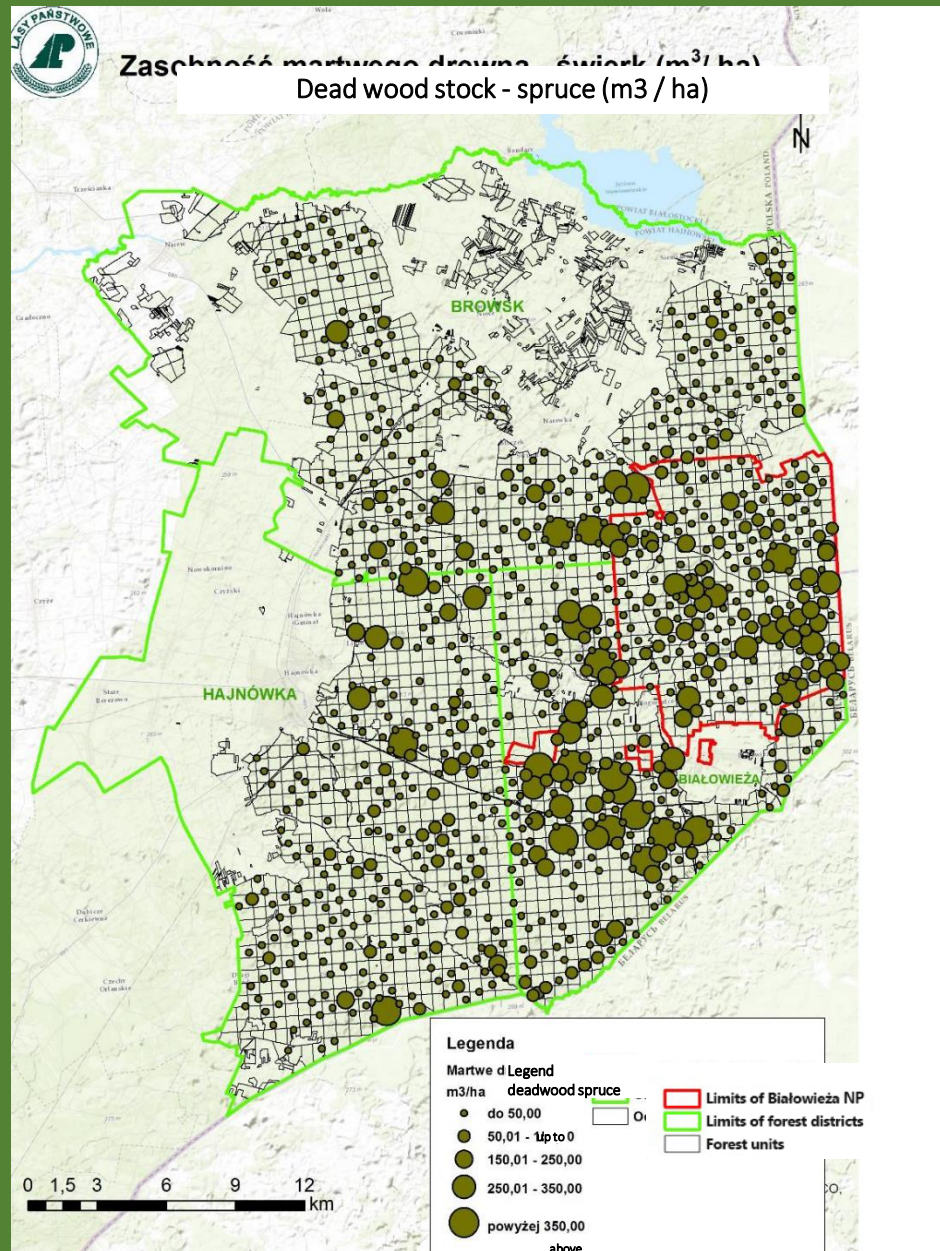
fot. Archive CILP

Circular areas:

- 1400 monitored areas in a regular grid of 650 by 650 meters (based on the ForBioSensing network) and additional areas (by choice);
- basic monitored areas - circular areas with a radius of 11.28 m (400 square meters).



Dead wood stock and mass in m3 per ha according to decomposition levels



Inventory of selected species of saproxylic beetles
- subjects of protection under Natura 2000 PLC 200004
Białowieża Forest area

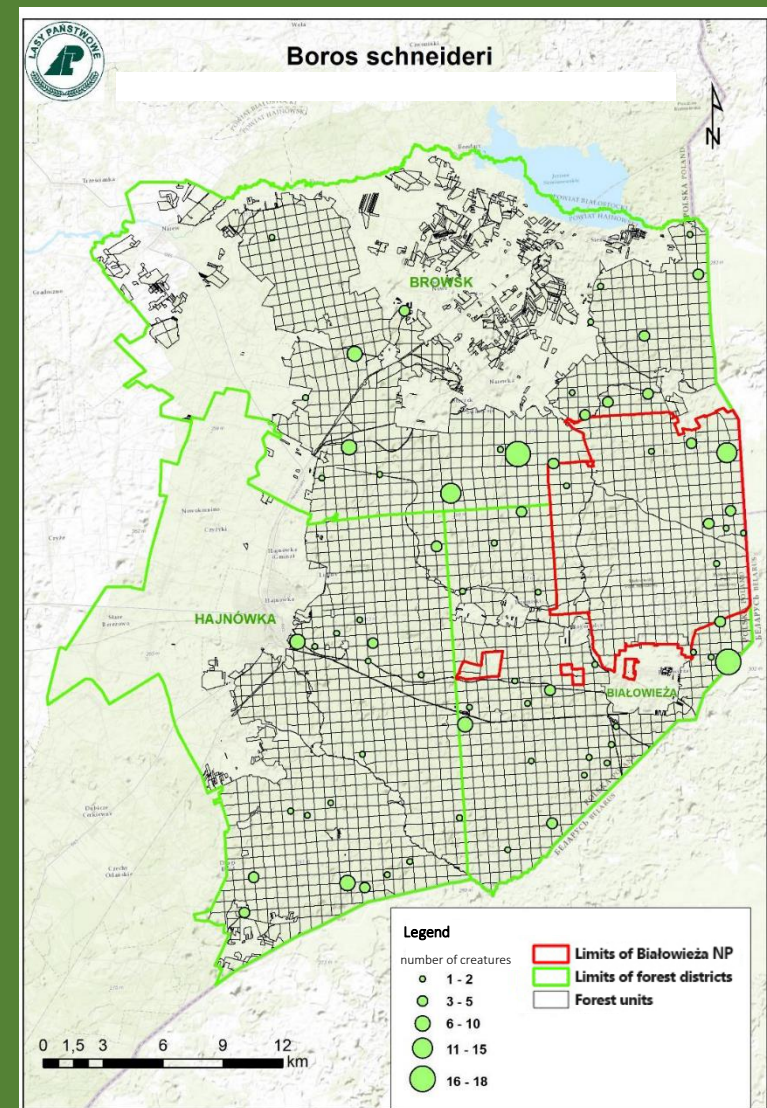
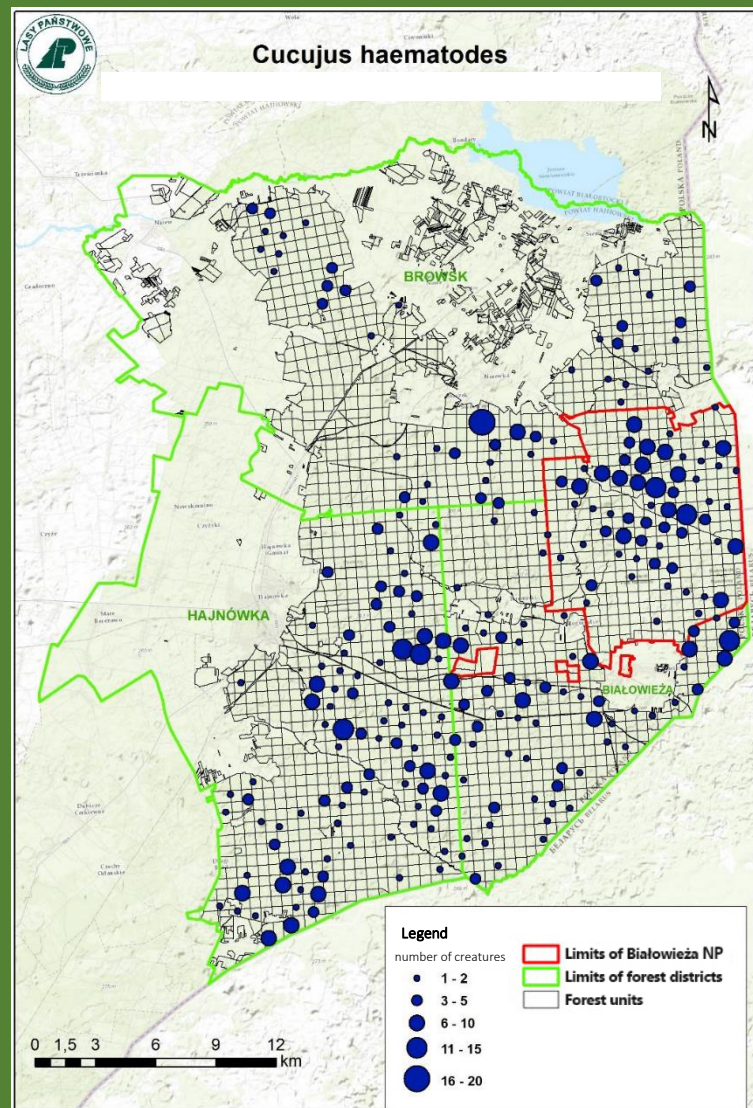
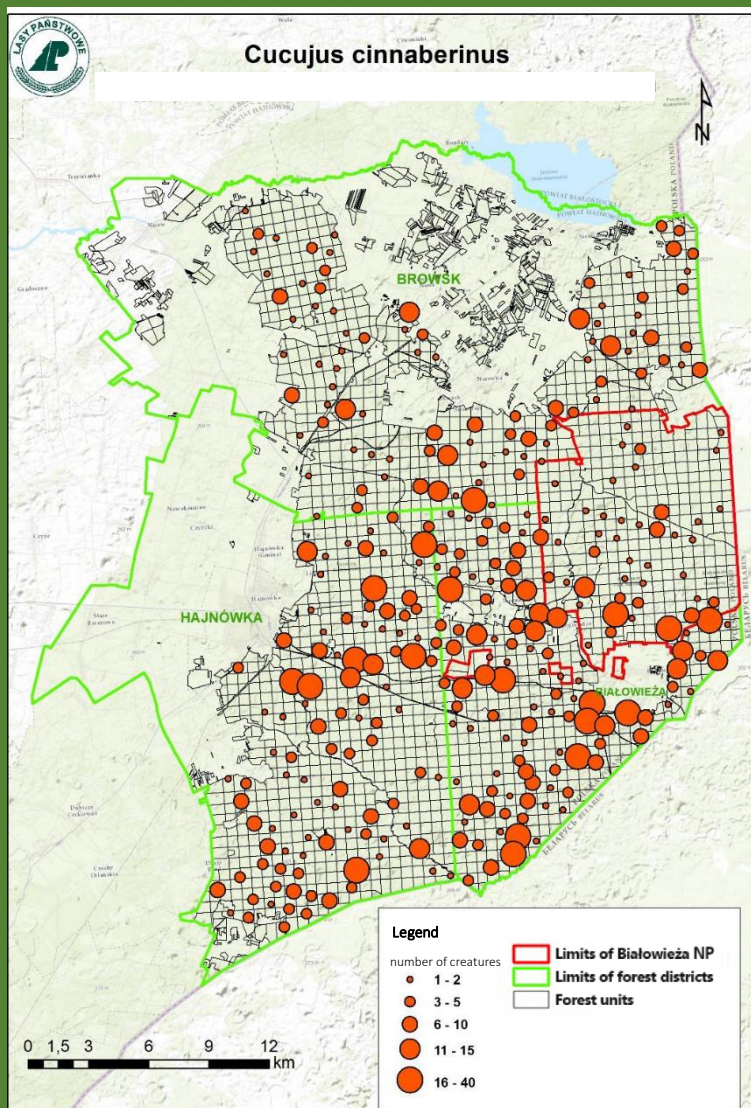
Cucujus cinnaberinus
C. haematodes



Boros schneideri



Inventory of selected species of sub-bark insects, subjects of protection under Natura 2000 PLC 200004 Białowieża Forest area



Great capricorn beetle – *Cerambyx cerdo* L.

- Habitat requirements: living old trees in sunlit places (Vodka i in. 2009)



Goldstreifiger *Buprestis splendens* F.

Habitat requirements: dry standing pines, preferably killed by fire, pyrophilous?



Fot. N. Rahme



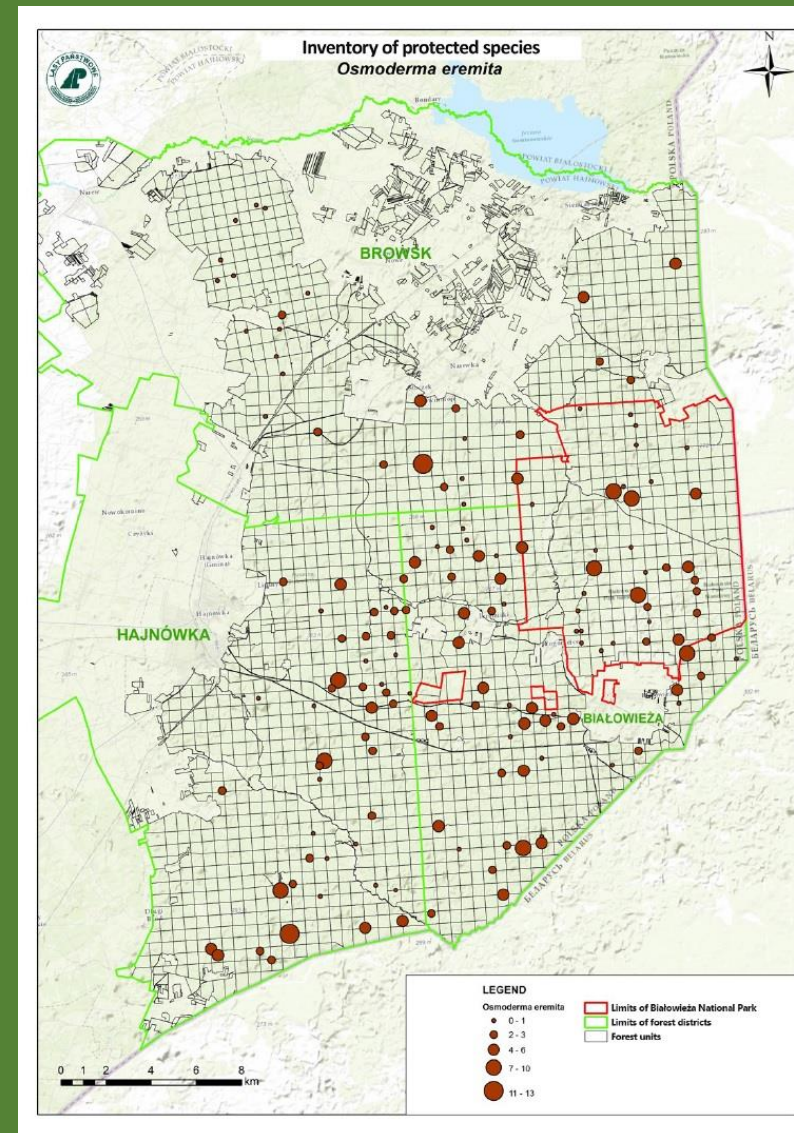
Fot. R. Pettersson

Phryganophilus ruficollis (F.)

- Preferring burned forest in Scandinavia
- Białowieża Forest – extremely rare



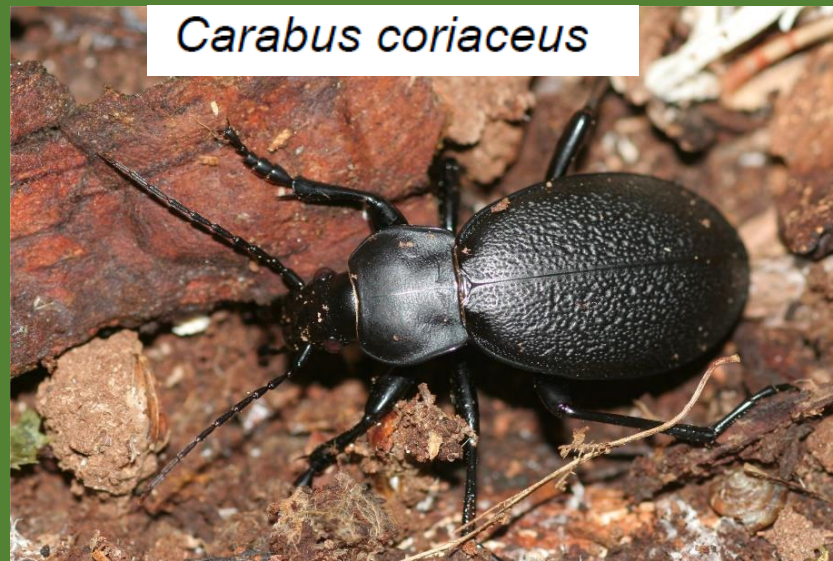
Hermit beetle *Osmoderma barnabita*



Carabus glabratus



Carabus coriaceus



Carabus hortensis



Pterostichus niger



Pterostichus melanarius (vulgaris)



Pterostichus oblongopunctatus

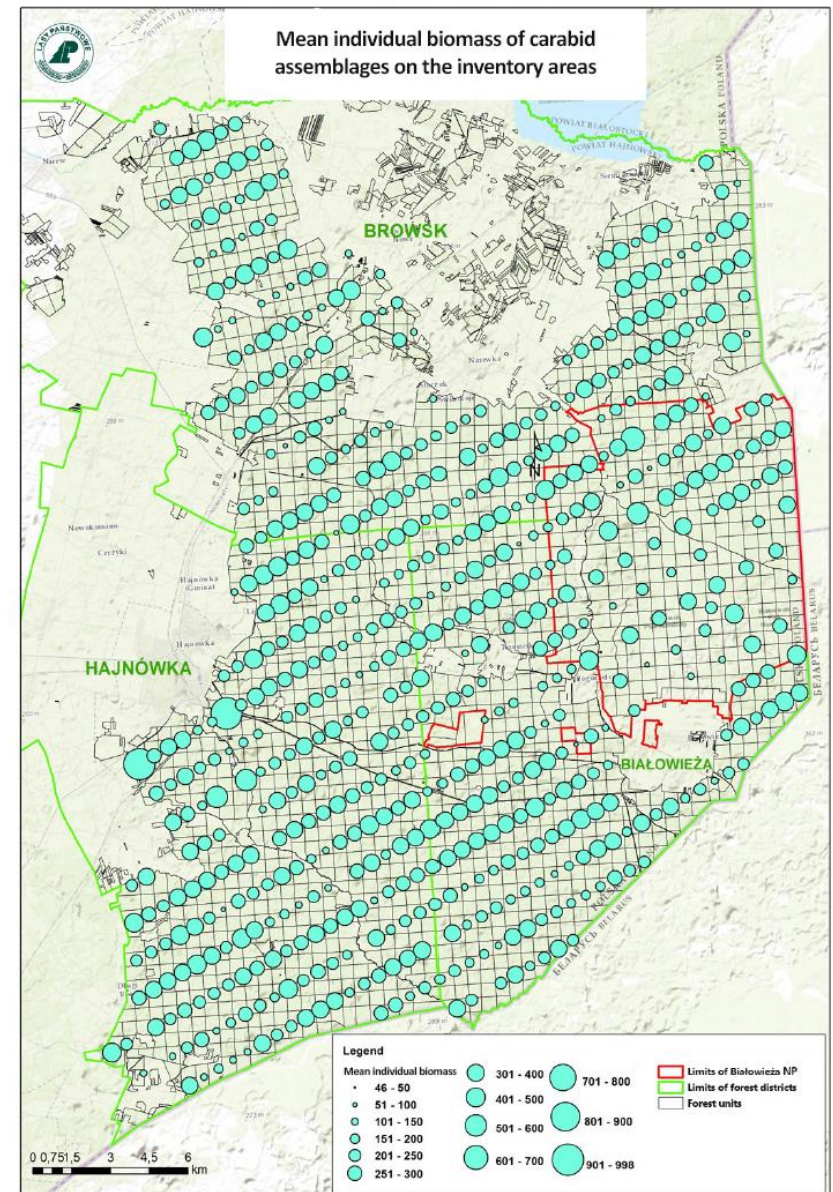
Average specimen biomass of carabid beetles on the inventory areas

<i>Carabus violaceus</i> (Linné, 1758)	1219	<i>Pterostichus diligens</i> (S. Sturm, 1824)	27
<i>Clivina fossor</i> (Linné, 1758)	122	<i>Pterostichus quadrigloveatus</i> (Letznér, 1852)	23
<i>Ocytus caraboides</i> (Linné, 1758)	297	<i>Colathus melanocephalus</i> (Linné, 1758)	17
<i>Dromius agilis</i> (Fabricius, 1787)	1	<i>Pterostichus vernalis</i> (Panzer, 1796)	17
<i>Dyschirius globosus</i> (Herbst, 1784)	8	<i>Leistus piceus</i> (Frölich, 1799)	15
<i>Elaphrus cupreus</i> (Duftschmid, 1812)	3	<i>Amara similata</i> (Gyllenhal, 1810)	12
<i>Epaphrus secalis</i> (Paykull, 1790)	139	<i>Clivina fossor</i> (Linné, 1758)	12
<i>Harpalus affinis</i> (C. R. Sahlberg, 1781)	37	<i>Amara lucida</i> (Duftschmid, 1812)	10
<i>Harpalus anxius</i> (Duftschmid, 1812)	3	<i>Panagaeus crumajor</i> (Linnaeus, 1758)	10
<i>Harpalus griseus</i> (Panzer, 1796)	2	<i>Amara ingenua</i> (Duftschmid, 1812)	8
<i>Harpalus laevis</i> (Zetterstedt, 1828)	604	<i>Badister bullatus</i> (Schränk, 1798)	6
<i>Harpalus lotus</i> (Linné, 1785)	239	<i>Colathus ambicus</i> (Paykull, 1790)	6
<i>Harpalus luteicornis</i> (Duftschmid, 1812)	2	<i>Colathus erratus</i> (C. R. Sahlberg, 1827)	6
<i>Harpalus rubripes</i> (Duftschmid, 1812)	3	<i>Dyschirius globosus</i> (Herbst, 1784)	8
<i>Harpalus rufipalpis</i> (Sturm, 1818)	1	<i>Poecilus cupreus</i> (Linnaeus, 1758)	8
<i>Harpalus rufipes</i> (C. R. Sahlberg, 1774)	122	<i>Oodes helopoides</i> (Fabricius, 1792)	7
<i>Harpalus tardus</i> (Panzer, 1796)	2	<i>Amara tibialis</i> (Paykull, 1798)	6
<i>Harpalus xanthopus winkleri</i> (Schauberg, 1923)	1	<i>Badister sodalis</i> (Duftschmid, 1812)	2
<i>Leistus ferrugineus</i> (Linnaeus, 1758)	1	<i>Leistus rufomarginatus</i> (Duftschmid, 1812)	5
<i>Leistus piceus</i> (Frölich, 1799)	15	<i>Agonum versutum</i> (Sturm, 1824)	4
<i>Leistus rufomarginatus</i> (Duftschmid, 1812)	5	<i>Amara consularis</i> (Duftschmid, 1812)	5
<i>Leistus terminatus</i> (Panzer, 1793)	1	<i>Bembidion lampros</i> (Herbst, 1784)	4
<i>Limodromus assimilis</i> (Paykull, 1790)	1138	<i>Bembidion neresheimeri</i> (I. Müller, 1929)	4
<i>Limodromus krynicki</i> (Sperk, 1835)	48	<i>Leistus terminatus</i> (Panzer, 1793)	4
<i>Limodromus longiventris</i> (Mannerheim, 1825)	40	<i>Acupalpus flavicollis</i> (Sturm, 1825)	4
<i>Loricera pilicornis</i> (Fabricius, 1775)	72	<i>Agonum longicorne</i> (Chaudoir, 1846)	3
<i>Microlestes minutulus</i> (Goeze, 1777)	1	<i>Amara familiaris</i> (Duftschmid, 1812)	3
<i>Nebria brevicollis</i> (Fabricius, 1792)	1021	<i>Amara ovata</i> (Fabricius, 1792)	3
<i>Notiophilus aestuans</i> (Dejean, 1826)	1	<i>Badister dorsiger</i> (Duftschmid, 1812)	3
<i>Notiophilus biguttatus</i> (Fabricius, 1779)	72	<i>Bembidion mannerheimi</i> (C. R. Sahlberg, 1827)	3
<i>Notiophilus germyni</i> (Fauvel, 1863)	2	<i>Elaphrus cupreus</i> (Duftschmid, 1812)	3
<i>Notiophilus polustris</i> (Duftschmid, 1812)	320	<i>Harpalus anxius</i> (Duftschmid, 1812)	3
<i>Oodes helopoides</i> (Fabricius, 1792)	7	<i>Harpalus rubripes</i> (Duftschmid, 1812)	3
<i>Ophonus schaubergianus</i> (Puel, 1937)	1	<i>Synuchus vivalis</i> (Illiger, 1798)	3
<i>Oxytelus obscurus</i> (Herbst, 1784)	348	<i>Agonum thuyi</i> (Dejean, 1828)	2
<i>Panagaeus bipustulatus</i> (Fabricius, 1775)	1	<i>Amara curta</i> (Dejean, 1828)	2
<i>Panagaeus crumajor</i> (Linnaeus, 1758)	10	<i>Colathus cinctus</i> (Metschulsky, 1850)	2

Pterostichus an		
Pedius long		
Platynus liv		
Poecilus cu	<i>Pterostichus nigrita</i> (Paykull, 1790)	406
Poecilus leg	<i>Pterostichus oblongopunctatus</i> (Fabricius, 1787)	11128
Poecilus ve	<i>Pterostichus ovoideus</i> (Sturm, 1824)	2
Pterostichu	<i>Pterostichus quadrifoveolatus</i> (Letzner, 1852)	23
Pterostichu	<i>Pterostichus rhaeticus</i> (Heer, 1837)	29
Pterostichu	<i>Pterostichus strenuus</i> (Panzer, 1796)	124
Pterostichu	<i>Pterostichus vernalis</i> (Panzer, 1796)	17
Pterostichu	<i>Stomis pumicatus</i> (Panzer, 1796)	57
Pterostichu	<i>Synuchus vivalis</i> (Illiger, 1798)	3
	Individuals	94415
	Species	109

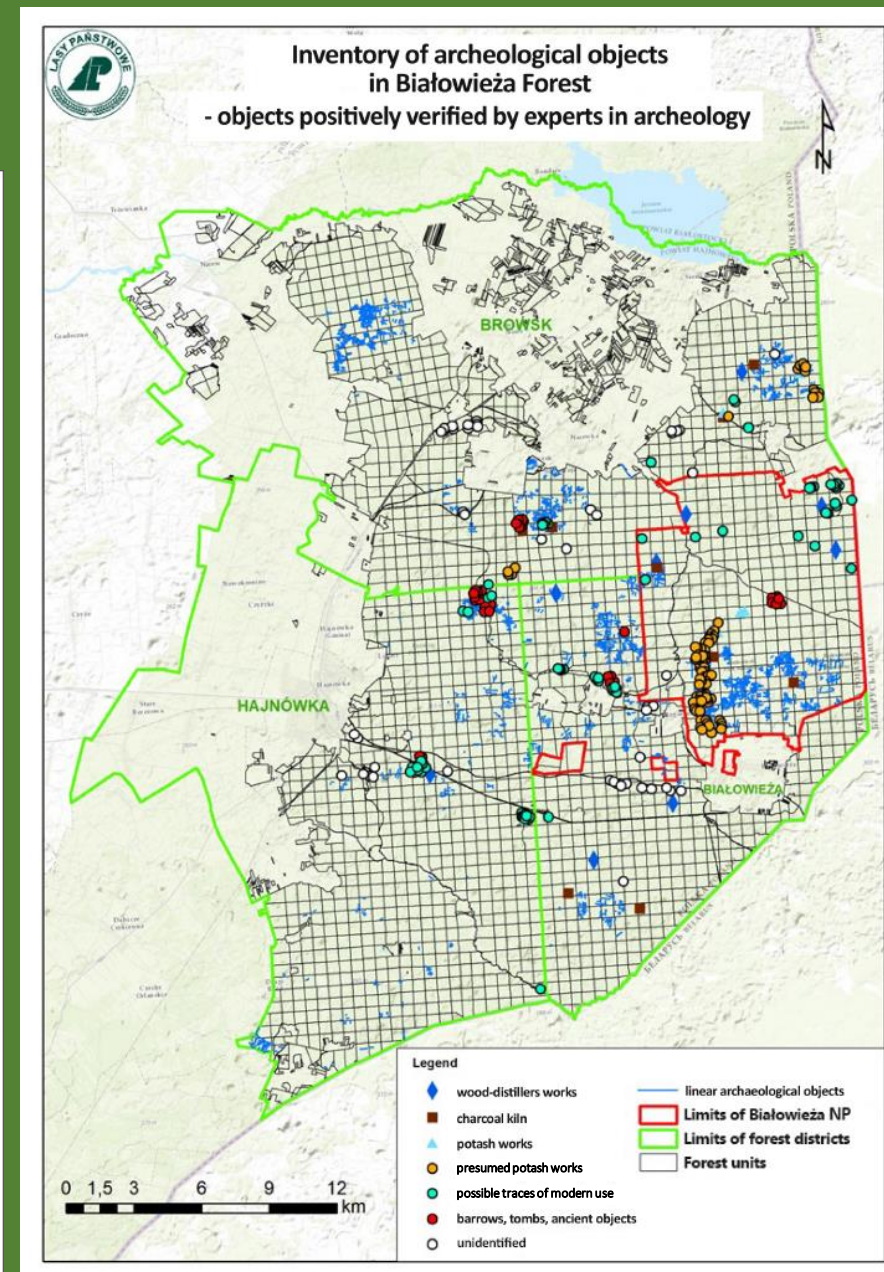
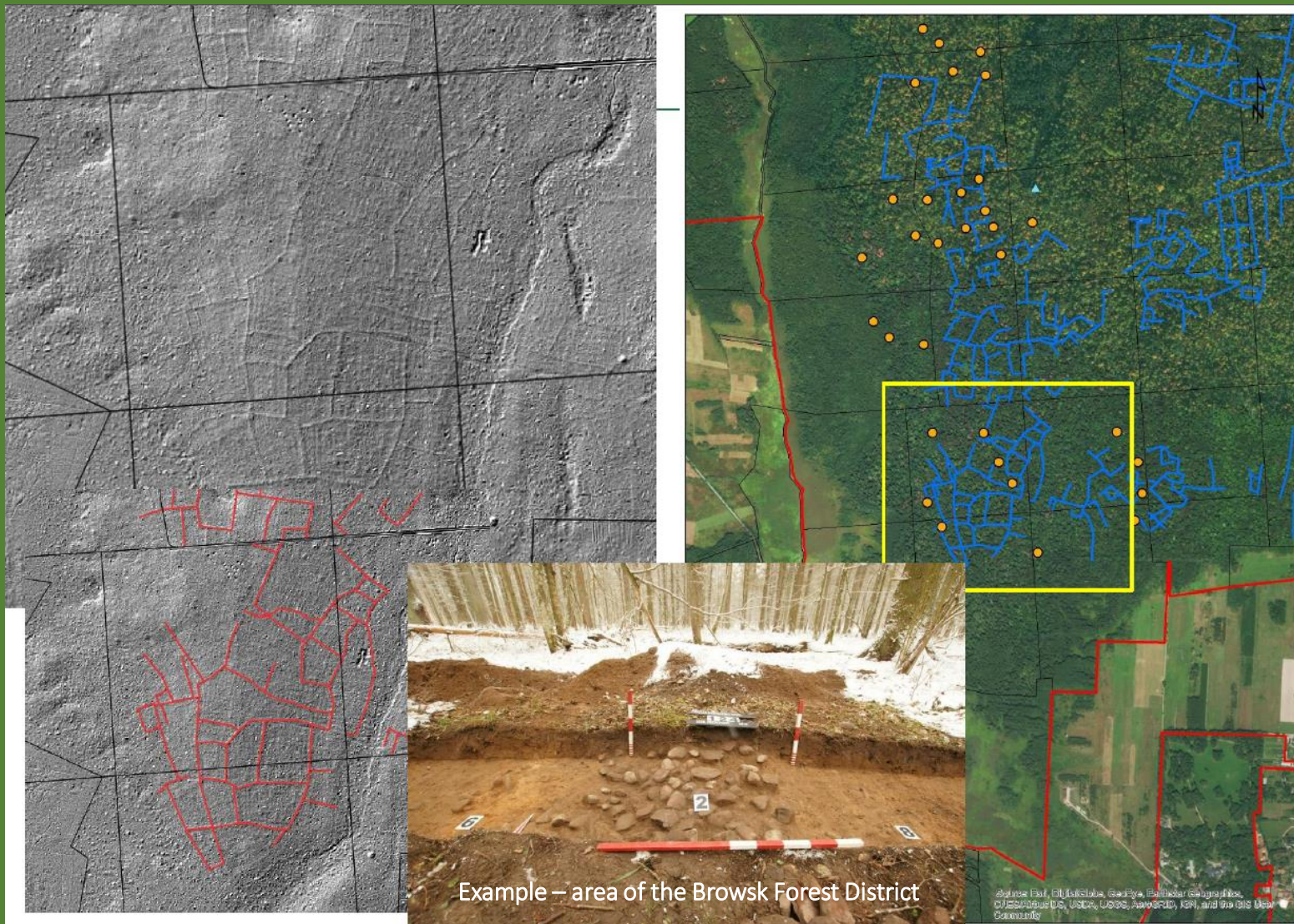
<i>Acupolpus foveicollis</i> (Sturm, 1825)	3	<i>Pterostichus niger</i> (Schaller, 1783)	✓	35860
<i>Agonum duftschmidii</i> (U. Schmidt, 1894)	66	<i>Pterostichus melanarius</i> (Illiger, 1798)	✓	12155
<i>Agonum emarginatum</i> (Gyllenhal, 1827)	68	<i>Corabus hortensis</i> (Linné, 1758)	✗	11419
<i>Agonum fuliginosum</i> (Panzer, 1809)	125	<i>Pterostichus oblongopunctatus</i> (Fabricius, 1787)		11128
<i>Agonum gracile</i> (Sturm, 1824)	35	<i>Corabus glabratus</i> (Paykull, 1790)	✗	4656
<i>Agonum longicorne</i> (Chaudoir, 1846)	3	<i>Oychus caraboides</i> (Linné, 1758)	✗	2997
<i>Agonum lugens</i> (Duftschmid, 1812)	1	<i>Corabus arcensis</i> (Herbst, 1784)		1423
<i>Agonum thoreyi</i> (Dejean, 1828)	2	<i>Corabus granulatus</i> (Linné, 1758)		1281
<i>Agonum versutum</i> (Sturm, 1824)	4	<i>Corabus violaceus</i> (Linné, 1758)		1219
<i>Agonum viduum</i> (Panzer, 1796)	29	<i>Limodromus assimilis</i> (Paykull, 1790)		11318
<i>Amara aenea</i> (De Geer, 1774)	28	<i>Nebria brevicollis</i> (Fabricius, 1792)		1021
<i>Amara brunnea</i> (Gyllenhal, 1810)	107	<i>Corabus caricus</i> (Linné, 1758)		940
<i>Amara communis</i> (Panzer, 1797)	403	<i>Pterostichus entracinus</i> (Illiger, 1798)		939
<i>Amara consularis</i> (Duftschmid, 1812)	4	<i>Corabus nemoralis</i> (O. F. Müller, 1758)		764
<i>Amara convexior</i> (Stephens, 1828)	29	<i>Colosoma inquisitor</i> (Linnaeus, 1758)		698
<i>Amara curta</i> (Dejean, 1828)	2	<i>Corabus concoloratus</i> (Illiger, 1798)		630
<i>Amara equestris</i> (Duftschmid, 1812)	1	<i>Colothus micropterus</i> (Duftschmid, 1812)		632
<i>Amara familiaris</i> (Duftschmid, 1812)	3	<i>Pterostichus aethiops</i> (Panzer, 1796)		605
<i>Amara ingenua</i> (Duftschmid, 1812)	8	<i>Harpalus levipies</i> (Zetterstedt, 1828)		604
<i>Amara lucida</i> (Duftschmid, 1812)	10	<i>Pterostichus nigrita</i> (Paykull, 1790)		309
<i>Amara lunicollis</i> (Schlödte, 1837)	1	<i>Amara communis</i> (Panzer, 1797)		403
<i>Amara ovata</i> (Fabricius, 1792)	3	<i>Oxytelopus obscurus</i> (Herbst, 1784)		348
<i>Amara plebeja</i> (Gyllenhal, 1810)	1	<i>Poecilus versicolor</i> (Sturm, 1824)		325
<i>Amara protermissa</i> (C.G. Sahlberg, 1827)	1	<i>Notiophilus pubescens</i> (Duftschmid, 1812)		320
<i>Amara similata</i> (Gyllenhal, 1810)	12	<i>Potrobus atrorufus</i> (Ström, 1768)		239
<i>Amara tibialis</i> (Paykull, 1798)	6	<i>Harpalus latus</i> (Linné, 1785)		300
<i>Badister bulleatus</i> (Schränk, 1798)	8	<i>Epaphys secalis</i> (Paykull, 1790)		139
<i>Badister dorsiger</i> (Duftschmid, 1812)	3	<i>Agonum fuliginosum</i> (Panzer, 1809)		125
<i>Badister laetuosus</i> (Sturm, 1815)	82	<i>Pterostichus strenuus</i> (Panzer, 1796)		124
<i>Badister meridionalis</i> (Puel, 1925)	1	<i>Harpalus rufipes</i> (C. R. Sahlberg, 1774)		122
<i>Badister sodalis</i> (Duftschmid, 1812)	5	<i>Amara brunnea</i> (Gyllenhal, 1810)		107

<i>Dromius agilis</i> (Fabricius, 1787)	1
<i>Harpalus luteicornis</i> (Duftschmid, 1812)	1
<i>Harpalus rufipalpis</i> (Sturm, 1818)	1
<i>Harpalus xanthopus winkleri</i> (Schauberger, 1923)	1
<i>Leistus ferrugineus</i> (Linnaeus, 1758)	1
<i>Microlestes minutulus</i> (Goeze, 1777)	1
<i>Notiophilus aestuans</i> (Dejean, 1826)	1
<i>Ophonus schaubergerianus</i> (Puel, 1937)	1
<i>Panagaeus bipustulatus</i> (Fabricius, 1775)	1



Inventory of archeological objects in Białowieża Forest

- objects positively verified by experts in archeology
- linear archeological sites





Thank you for attention