

Honeyguide

WILDLIFE HOLIDAYS

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Poland 13 – 21 May 2017

Holiday participants

Rita and Wilkie Harrigan
Geoff Morries and Jane Baddeley
Ian Holmes
Felicity and Tim Ferry
Norman Sills and Linda Gascoigne
Kenneth and Sandra Duncan
Jeff Graves
Douglas Willis

Leader: Artur Wiatr www.biebrza-explorer.pl Report by Norman Sills, plant list by Geoff Morries.

Photos by Jane Baddeley, Sandra Duncan, Tim and Felicity Ferry and Geoff Morries. Cover, top: young elk (SD); flooded forest at Białowieża (JB). Bottom: Biebrza Marshes (SD). Below: the group.



In Biebrza National Park we stayed at Dolina Biebrzy http://nowadolina.dolinabiebrzy.pl/
In Białowieża we stayed at Gawra Pensjon at www.gawra.bialowieza.com



White stork (JB).

This holiday, as for every Honeyguide holiday, also puts something into conservation in our host country by way of a contribution to the wildlife that we enjoyed. The conservation contribution this year of £40 per person was supplemented by gift aid through the Honeyguide Wildlife Charitable Trust, leading to a donation of £600.

The donation went to The Workshop of Living Architecture, a small NGO that runs environmental projects in and near Biebrza Marshes. This includes building new nesting platforms for white storks, often in response to storm damage or roof renovation, or simply to replace old nests. The total for all conservation contributions through Honeyguide since 1991 was £117,457 to June 2017.

DAILY DIARY

Our visit to Poland seemed like one to lowland England of long ago; of things elemental: of water and of wood. The pulse of winter-water had come into the rivers long before we arrived; it was melt-water from snow-fields and iced lakes farther to the north and west. The water had risen and – as the rivers are more Avon than Amazon – it had spread laterally across the flat flood-plains until it halted against higher ground half a mile, or maybe two miles, away; no man-made flood-banks, just water rising, spreading, covering and receding without constraint. Shortly before we arrived, the water had fallen to just above marsh level so now there were vibrant shades of green emerging from vast expanses of wateriness into the blue-sky warmth of May; not only greens of meadow grasses, sedges and reeds but also mauves and whites of lady's smock and other tall, wetland plants. On slightly higher ground, the water-meadows were liberally splashed with hosts of golden dandelions, perhaps acting as stand-ins for marsh marigolds and proclaiming an equal glory.

So here were the rivers Elk, Biebrza (pronounced bee-ayb-shah) and their tributaries winding lazily towards the larger river Narew (Narev) and we were about to take a closer look at a 40 mile stretch of the Biebrza's flood-plain so see what lay therein.

Our first guest-house, in the hamlet of Wrocen, was not merely near the marsh, it was almost in it! Cranes bugled, black-tailed godwits whickered, a bittern boomed, an osprey carried its supper and a thrush nightingale sang to the dusk...and all that was from our bedroom window overlooking the river and half a mile of marsh beyond. So what else was out there?

Sunday 14 May - Biebrza marshes

At 2am a spotted crake's whiplash call punctuated the silence and at 4am cranes and cuckoos announced the dawn. A before-breakfast stroll along the lane showed that avian residents of the hamlet included icterine warbler, spotted flycatcher, tree sparrow, fieldfare, white stork, serin and, on the marsh beyond the river, two male garganeys, 150 ruffs/reeves, wood sandpiper, greenshank, great white egrets (18), blue-headed wagtails and sedge warblers. As we sat down to breakfast, a pair of black redstarts were ferrying a continuum of breakfasts to their nest-full of youngsters above the guest-house door.





Black redstart brood and white-winged black tern (TFF).

Then we headed downriver, seeing a male Montagu's harrier on the way. The first stop, in Goniadz village overlooking a 2.5 mile *width* of marsh, revealed what the Biebrza marshes were all about: many hundreds of black terns, dozens of great white egrets, large flocks of ruffs being teased by a marsh harrier, many white storks dotted across the greenery, two cranes a mile apart and an elk with young, safe in this huge expanse of solitude.

We moved on to a nearby village, Budne, and saw several hundred white-winged black terns over a marsh, a hoopoe in a garden and, in a small wood by the lane, a pair of golden orioles, two hawfinches and a thrush nightingale that Artur (our leader) got his 'scope onto before the rest of us even knew which bush it was in.

On again to a spot to have lunch; but rule number 1 of lunch-spots: scan the place first, eat while you watch the special species! Hence we soon had white-spotted bluethroats in the 'scopes, with Savi's warbler singing (and seen briefly) plus willow warblers, whitethroats and cuckoos. Nearby was a boardwalk alongside a reedbed which provided excellent views of a penduline tit pair at their half-built nest as well as a male garganey, little grebe, gadwalls and a pair of diving common terns.

Then we drove along a forest track near Sosnia and stopped to meet a friend of Artur. He joined us to look over another section of Biebrza's marshes. Two white-tailed eagles, lots of whiskered terns, some black terns, a bittern and a close look at some mousetail *Myosurus minimus* ended an excellent 5-stop trip without too much travelling. Two spotted crakes calling at 9pm, beyond the river at Wrocen, added a final exclamation mark to a fulfilling day.

Monday 15 May - Biebrza marshes

After a pre-breakfast walk (grey partridge, golden oriole, lesser whitethroat, crane etc.) we headed downriver for 30 miles and stopped at several places along a back road. First was near Wrocen: cracking views of a singing ortolan bunting in an ash tree with white-tailed eagle and several cranes flying in the back-drop of undulating farmland and distant forests. Another ad hoc stop gave us excellent views of a male Montagu's harrier with marsh harrier and buzzard for comparison; nearby was a male whinchat atop a willow.



Bogbean (GM)

From the village of Mscichy we walked along a dirt track and here, again, was the epitome of Biebrza's marshes: seven cranes overhead and four among the sedges, white storks poking about for food, corncrakes craking in two places, several whinchats, a hobby, displaying snipe, a black-tailed godwit, two great white egrets, grasshopper and willow warblers, green sandpiper and cuckoo. The real gems, though, were a couple of aquatic warblers and two or three citrine wagtails which behaved well within 50 yards; our three telescopes were put to full use! Extremes of size – swallowtail butterfly and elk – added further dimension to this classic Polish-marsh scene. Bogbean and water crowfoot were just two of many species of aquatic plants.

Eight miles farther down river at Brzostowo there were many hundreds of white-winged black terns and 50- 100 black terns, all taking advantage of insects that were emerging from the water. Whiskered terns, at least dozens, were there too but, unlike the

others, they were belly-flopping onto the water and grabbing food from below the surface. Different again were two little terns and two common terns diving for fish. So here were five species of tern using at least three different hunting methods and perhaps selecting finely-different prey sizes. Here also were three blackwinged stilts, a distant pair of cranes and two or more great white egrets among others.

Three miles farther on, at Burzyn, the water had receded less and terns were fewer. Here, from a timber look-out tower, were 100+ ruffs, redshanks, numerous shovelers, 15 gadwalls, two male wigeons, a pair of pintails and all within the sharp vision of two white-tailed eagles perching in a willow.

Another back-road – the 13 mile long Tzar Road – formed the return route of our round trip. Just after 5pm we crossed the River Narew on a raised section of road and then stopped to look down onto the shallowly-flooded expanse of marsh. White-winged black terns were everywhere: overhead, close-to, far away, well left

and well right ...all swinging, dipping, circling and sweeping across their immense plateful of insects. There were 15 short, wooden posts in the marsh and each held a white-winged black ... or two if mating. The whole scene suggested a successful breeding season lay ahead.

Our final stop was at the renowned Lawaki fen: 5,000 hectares (19 sq. miles) of fen, managed by two-year rotational mowing to emulate the low-intensity cattle-grazing of times past, and home to 2,000 pairs of aquatic warblers. From the board-walk we saw and heard several of this globally-threatened species; Lawaki truly is major conservation in action.

As we returned we slowed almost to a halt to glimpse a crane on its nest in a pool only 30 metres from the road. Later, we heard that both eggs had hatched despite sporadic attention from passers-by.



Nesting crane surrounded by cotton grass (TFF).

Tuesday 16 May - Biebrza marshes

During the early morning walk in the village, we encountered some familiar avian faces but, beyond the last house, we found a pair of corn buntings and a whinchat, on overhead wires, which were seemingly watching the antics of seven hares: chasing, boxing and generally charging about in a ploughed field.

Then we headed north-east, swung through a wide arc to cross a river, and veered southwards to the Grzedy protected area. On route, near a bridge over the Biebrza, we came across our first common rosefinch (not that common), a white-tailed eagle, hoopoe, two citrine wagtails, several cranes, a lesser spotted eagle and, for some, another good, close view of a thrush nightingale. At another brief stop, at some canal locks, there was a great reed warbler and a distant pair of cranes with a fat, three week-old youngster.





Small pasque flower Pulsatilla pratensis (GM); whinchat (TFF).

The Grzedy protected area is deciduous and pine woodland on sand dunes overlooking a distant marsh; more wood, less water. Among the birds were honey hoopoe and buzzard. redbreasted flycatcher (calls and song), icterine and wood warbler, black woodpecker (call only) and tree pipit. But look down and there was more: small heath, brimstone, orange-tip, hairstreak, map and Camberwell beauty butterflies and a lot of hepatica, small pasque flower, spring pea, orpine and Solomon's seal among an array of lady fern, lily of the valley, sweet woodruff and wood anemone.

On the return we added common sandpiper and a pair of goosanders to our wetland experience and ... a different exclamation mark at the day's end... a corncrake vigorously striking its 'washboard' not far from our riverside retreat.

Wednesday 17 May - Biebrza marshes

An early-morning walk was avoided because we planned to be out late in the evening. After breakfast we headed for new places: a raised bog, a lady's slipper orchid site and ... well, we hadn't yet found red-backed shrike. Soon after we left a pair of Montagu's harriers offered some fine views as they circled and talon-grappled above an oil-seed rape field next to the road.

The raised bog was privately-owned and despite its relatively sparse cover of birch trees, the owner was reluctant to fell the trees until they became large enough for a firewood income. Nevertheless, this unusual tree-cover, for a bog, still allowed in light to promote a growth of heather, sundew, cotton-grass, bilberry and northern bilberry around ancient peat diggings, as well as Labrador tea and interrupted clubmoss in less open places. Four species of woodland warbler affirmed the succession from bog to wood and many green hairstreaks enjoyed the sheltered yet sunny position. Not so fortunate was an elk that had fallen into one of the steep-sided pits that became its grave.

Next was the lady's slipper orchid site where we were shown many plants but only one or two of which were sort of in flower due to the recent cold weather. But botanists' eyes soon winkled out asarabacca (spectacularly insignificant ...pollinated by slugs!), a marsh orchid (but which one?), marsh violet yet to flower, ragged robin and marsh lousewort.

Not far away we paused for lunch. Lunch-spot rule number 1 was soon applied and within a minute a great grey shrike was seen on a branch of an old birch stump. Lunch preparations were halted, another 'scope was set up and we all saw the bird flying from stump to telegraph pole to stump and, eventually, we saw its two fledglings floundering around in a nearby willow.

On the way back, Artur spotted a male red-backed shrike in a classic shrike site: an old pit with unwanted rubble, large rocks removed from fields and great wodges of tangled brushwood, all embraced by an untidy array of old apple trees, willows and hawthorns; the sort of place we remove and cultivate in the UK.

Dinner was purposefully early, 4.30pm. During the preceding hour, Jeff, Linda and I sat overlooking the river and marsh. All the regulars were there: waders, wagtails and white-winged blacks. Then a white-tailed eagle appeared. It landed in a flattened patch in the reedbed (to the dislike of the resident marsh harrier) but then retreated to a tall tree on the wood-edge behind. Then another eagle appeared over the wood – but a very dark (black?) eagle with a smudgy, pale patch on each wing. For more than half-an-hour I followed it with the 'scope. It flew higher, then much higher, then fell like a peregrine, swept back up, rolled at the top, briefly wing-fluttered, then down, up, over, down, up, somersaulted, climbed even higher, then a repeat and, finally, it drifted away up-river, way, way up in the blue. Just before it disappeared behind a nearby willow, a second, identical eagle also flew up-river but much lower. The first bird was a greater spotted eagle – presumably one of the dozen pairs in the Biebrza marshes – and it was sky-dancing (displaying) to probably a passing female. When I finished watching, I had a stiff neck (the 'scope was at 45 degrees) and I needed a stiff drink!

The early meal was followed by a birthday cake for Jane and then we headed 32 miles south to the river Narew to look for beavers.

Geoff hit the jackpot first with his 'behind a bush moment' – a beaver within a few feet – but eventually we saw at least a couple of beavers ferrying willow branches to their lodge, gnawing bark off twigs, crunching, scraping, chomping, diving and simply getting on with beaverness. Not many tourists go home with beaver-chewed twigs in their luggage!

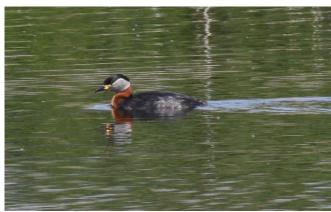
We returned along the Tzar Road at dusk: past silhouetted storks on their pole-top beds, past the terns on their posts, past the aquatic warblers in their famous fen and past the crane and her chicks on their pond-side nest. This was our last day of the Biebrza River and its marshes; tomorrow we'd be heading for Białowieża and its forests.

Thursday 18 May - from Biebrza to Białowieża

Prior to leaving Wrocen, Linda and Artur spotted a black stork over the far wood and, soon afterwards, a peregrine powered its way down-river causing mayhem for the ruffs and sandpipers. The white-tailed eagle was still there and, eventually, it found a tree-top which didn't collapse under its weight; from there it watched everything that moved on the marsh in its usual, lordly manner.

Our journey south-eastwards included two stops: at a quarry and then at a collection of large fish-ponds near Bialystok; swifts, Montagu's and marsh harriers were seen on route. At the quarry – sand and gravel with interesting granite erratics – there were just half a dozen bee-eaters (it was near the northern edge of their breeding range) but hundreds of sand martins about to re-occupy their burrows. On nearby fields there were blue-headed wagtails, a northern wheatear and one tawny pipit clearly shy of binoculars and telescopes.





Blue-headed wagtail (JB) and red-necked grebe (TFF).

At the fish-ponds we had lunch, but first: 'scope, scan and result ... a pair of black-necked grebes out on open water which most of us saw while clutching a sandwich. A walk between the ponds enabled us to see two pairs of great crested grebes and three pairs of red-necked grebes while the reedy margins held reed and great reed warblers, lesser whitethroats, tree sparrows, common rosefinch and a booming bittern. Most noise, though, came from a multitude of fire-bellied toads, one of which was clearly not telescope-shy. Artur set his 'scope on it - almost filled the view – as it sat there, fat and languid, watching us watching him.

We arrived at the village of Białowieża where, immediately, there was the feeling of timber, of wood, of mankind using and manipulating wood, indeed venerating wood. The oldest houses were made of heavy, horizontal timbers – think railway sleepers battered by weather and time. Where two timbers met at a corner, each was dove-tailed once into the other; dove-tails seemingly crude yet precise, more likely fashioned with cross-saw and axe than with chisel and mallet. Next door was modern: concrete blocks clad with nailed-on shiplap boarding, finished with top-quality preservative, coloured and shiny. Our guest-house matched this theme: heavy timber facades, timbers below bedroom ceilings, exposed joists and rafters in the dining rooms; pseudo-old but in-keeping. At the entrance: a life-sized carving of a brown bear; inside, animals of the forest: lynx, beaver, elk, wolf, bear and bison... hunters' so called 'trophies' of the past but species all of which continue to roam the forest.

After dinner we met Arek: 69 years old and a woodsman of long-standing with an MSc in forest ecology; as sturdy as a log. He led us along forest rides but then he paused 20 yards before a tree with a bark-less gash. Here we found a three-toed woodpecker and watched it for a while.

Soon after, Arek heard a pygmy owl's call. The pygmy owl played cat-and-mouse with us: the sparrow-sized silhouette flew into dark trees and out, over the ride and back again, threw its voice from that side...or was it this side? ... but all except two of us saw it perching briefly on a ride-side branch at head height before it disappeared into the now darkened forest. During the evening we also saw or heard a black woodpecker calling and drumming, a great spotted woodpecker, a nuthatch and a woodcock; inveterate peckers and pokers of old, deciduous forest.

Friday 19 May - Białowieża

Today, Arek took us to even older deciduous forest: scarcely touched by the hand of man; true, unfettered, ancient primeval forest, a complete and complex high-forest ecosystem, 18 square miles of it, world-renowned, precious.

We started at 4am. Approaching the forest with a cool, misty and dew-laden promise of a fine day, we saw a white-backed woodpecker in a lone willow and a whinchat, corn bunting and orioles in and around a tree-edged field. Corncrakes grated from somewhere in the mist.

Heavy, squared, oak timbers formed the tall, arched entrance gate; dovetails and dowels, and dedicated to men of vision who saved the forest from the plough. We entered as if into a nave: low-light, tranquillity and awe. Indeed, walking in the forest (permitted only with a licensed guide, Arek) was akin to walking in a cathedral, eyes drawn upwards. But the grandiose height, breadth, length and volume of it were mere dimensions. Here was time, birth, reproduction, death: generations fleeting or dragging through the millennia, whether aphid or oak. Pondering a few square yards of ground – like pondering an inscribed marble slab in a cathedral floor – was to feel the weight of time and a human's trivial impermanence amid the earth's struggle for steady-state endlessness. The forest is a tome on the lectern of post-glacial history.





Artur explains about beavers; Białowieża Forest (TFF).

More than 20 species of birds caught our eye or ear during this brief visit. The highlights were collared and red-breasted flycatchers and a pair of middle-spotted woodpeckers at their nest. High in the stained-glass window of multi-green foliage and stark, dead wood against a blue sky were also warblers, thrushes, tits and finches, black woodpecker, cuckoo, nuthatch, wren and goldcrest.

Alongside the well-trodden aisles (to which humans are restricted) were drifts of ramsons and wood stitchwort plus spring pea, herb paris, toothwort, asarabacca, coralroot bittercress, lungwort and a host more. At one place, low ground was a font of water violets, feathered greenery sprawling across the water-surface, soon to be christened with its flowers. So here were birds and plants all slotting into their respective niches in this pristine and awesome edifice of nature.

Later we walked around the park and lake near the village. Here was our best view of a singing common rosefinch, Linda spotted a hawfinch, Douglas found a marsh tit pair plus nest while great reed warbler and collared flycatcher attested to the juxtaposition of water and wood.

From 2pm to 5pm we strolled for a mile along a boardwalk through wet, lightly-managed primeval forest and had brief glimpses of black woodpecker and songs of collared and red-breasted flycatchers. On our return, a stop at a bridge produced excellent views of a vocal marsh warbler, a distant pair of red-backed shrikes, three hawfinches, a willow tit and, for Artur, brief songs of ortolan bunting and river warbler.

The final jaunt of the long day aimed at seeing bison deep in the forest in the evening. There were billions of mosquitoes, a pond full of flowering water violets and tree-frogs, a black woodpecker calling, a lesser spotted eagle, a distant crane-call echoing through the trees, many bison foot-prints ... but no bison. The long trek back to the bus culminated in Mirek, in his driver's seat, having seen a bison cross the road only yards in front of him! Would Saturday be *our* bison day?

Saturday 20 May - Białowieża

Artur, Jeff and Ian went out early and saw or heard grey-headed woodpecker, wryneck, marsh warbler, a few red-backed shrikes, whinchat, icterine warbler and ... bison, two! They were two of 600+ that are free to wander in more than 40 square miles of the National Park primeval forest.

Later, we were all taken northwards through eight miles of forest, heading for a country park. On the way we stopped at a disused railway track where icterine and river warblers were heard as well as spotted flycatchers, three distant lesser spotted eagles and the ubiquitous thrush nightingale. Another on route walk went well into the forest in search of an active black woodpecker's nest. Red-breasted flycatchers, wood warblers and a pied flycatcher were singing but the woodpecker was apparently sitting tight on a clutch of eggs in a tall, dead tree and who knows when its mate would return? We had to go.

At the country park we had lunch but there was no scope for 'scoping this time. We walked a short way to some open land – river, reed and bushes – where a male barred warbler sallied forth, literally, and sang from a nearby willow. Icterine and wood warblers, more red-backed shrikes, three corncrakes, two buzzards and a thrush nightingale shared the barred warbler's bushy and boggy abode. A little farther on we stopped abruptly because Artur had heard a wryneck. Although the wryneck disappeared, we were treated to a prolonged telescope-view of a river warbler grasping a willow-herb stem only 50 yards away. Its cicada-like song was so incessant – did it draw breath? – that the bird and its perch shook with the vibrations of energy.

For the final stop of the afternoon we moved to yet another well-placed timber tower overlooking a 14 square mile so-called reservoir; with shallow water and wide sweeps of reedbeds over much of it, the place had to be more important for wildlife than for water-storage. Here were an osprey with fish, at least 30 great white egrets, 20 cormorants, a preponderance of black terns with whiskered, white-winged blacks and common tern, a small mixture of ducks and a booming bittern. Our brief visit to this one spot prompted thoughts of a day there, a week, to delve into its 18 miles of perimeter. Then Artur heard a black woodpecker not far from the tower: a blur of Artur down the steps and a dash into the forest, others close behind, were followed by a few seconds to see the bird vacating its leafless alder and disappearing into the pinewoods behind.

At dinner we each talked of our special moments of the week: of hares and harriers, of forests and firebellied toads and of beavers and Camberwell beauties. But we were all thankful for Artur's keen eyesight, knowledge, patience, tolerance and good humour especially under his own personal difficulties at the time. His carnations for the ladies on our arrival and the home-made cake for Jane were thoughtful indeed.

After dinner, six of us and Artur went to the morning's bison site and, at 9pm, there they were! Two bulls ambled from the forest-edge, lay down in the meadow and, in the fading light, watched us continuously with, it seemed, disdain for our intrusion; they were of the forest, we were mere users and spectators.

Sunday 21 May

Before breakfast we returned to the bison meadow but they had wandered on, leaving only hoof-prints in the sand. We glimpsed a black woodpecker and saw red-backed shrikes and golden orioles near the forest-edge. Tree sparrows and lesser whitethroats were around the old, timber houses and dishevelled gardens. Later, a quick, last glance from a nearby river bridge showed that, for example, black redstart, wryneck and rosefinch were all still busy with their endeavours to succeed.

Then we left the lands of water and of wood; lands which the UK have largely destroyed, lands which Poland have largely revered and cherished. Thanks, Chris, for a memorable holiday!



Koniks – Polish ponies – now also used in the UK for grazing wetlands (TFF).

WILDLIFE LISTS

BIRDS, May 2017

BM = around Biebrza marshes 13^{th} to 18^{th} . BF = around Białowieża forest area 18^{th} to 21^{st} .

Black-necked grebe	One pair at pools east of Bialystok on 18 th .	
Little grebe	One or two in BM on two days.	
Great crested grebe	At one site in BM and two pairs at Bialystok pools on 18th.	
Red-necked grebe	Three pairs at Bialystok pools on 18th.	
Cormorant	Several in BM on most days and 20+ at Siemianowka lake on 20 th .	
Bittern	Heard every day in BM, at Bialystok on18 th and at Siemianowka lake on 20 th .	
Great white egret	Seen most days in BM; 18 opposite Wrocen. 40+ at Siemianowka lake on 20 th .	
Grey heron	Many singles seen almost every day in BM and at Siemianowka lake on 20th.	
Black stork	One over Wrocen (BM) on 18 th .	
White stork Mute swan	Seen every day except 19 th ; dozens in some areas. Nests in many villages. Small numbers most days in BM; 20 near Wrocen. c20 at Siemianowka lake 20 th .	
Greylag goose	Several pairs in BM on two days. Also at Siemianowka lake on 20 th .	
Wigeon	Two males in BM on 15 th .	
Gadwall	In BM: 3+ on 14 th and 20 on 15 th . Four at Siemianowka lake on 20 th .	
Pintail	One pair in BM on 15 th .	
Mallard	Small numbers seen in BM almost every day.	
Shoveler	Several in BM on 15 th .	
Garganey	One or two males in BM on five days.	
Pochard	A few or several in BM on three days.	
Tufted duck	A few pairs in BM on two days; a few pairs at Siemianowka on 20 th .	
Goosander	A pair overhead in BM on 16 th .	
White-tailed eagle	One, two or three in BM on five days.	
Osprey	Single with fish in BM on 13 th and Siemianowska lake on 20 th .	
Lesser spotted eagle	Two in BM on 16 th . BF: two on 19 th and three on 20 th .	
Greater spotted eagle	Two (one displaying) at Wrocen (BM) on 17 th .	
Marsh harrier	One or a few seen almost every day.	
Montagu's harrier	A single or a pair on four days, mainly in BM.	
Common buzzard	Seen every day.	
Honey buzzard	One in Grzedy protected area on 16 th .	
Sparrowhawk	A single on two days.	
Common kestrel	One near the airport on 13 th . One near Wrocen.	
Hobby Peregrine	One or two in BM on two days. One at Wrocen (BM) on 18 th .	
Grey partridge	One or two in BM on three days.	
Corncrake	One or two calling in BM on two days and two or three in BF on two days.	
Pheasant	One in BM on 14 th .	
Spotted crake	One or two at Wrocen (BM) every day.	
Moorhen	A few almost every day, mainly in BM.	
Coot	In BM a few pairs on at least two days. Also at Siemianowka Lake on 20 th .	
Eurasian crane	Up to several seen or heard every day in BM and BF. One on a nest with eggs –	
Luiasian Ciane	which hatched – and one pair with a 3 week old young.	
Black-winged stilt	Three in BM on 15 th .	
Lapwing		
	Seen every day but one. Breeding birds rather than flocks.	
Ruff	Up to hundreds in BM every day.	
Snipe	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds.	
Snipe Woodcock	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th .	
Snipe Woodcock Black-tailed godwit	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day.	
Snipe Woodcock	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day.	
Snipe Woodcock Black-tailed godwit Redshank Greenshank	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day. Singles in BM on 13 th and 16 th .	
Snipe Woodcock Black-tailed godwit Redshank Greenshank Dunlin	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day. Singles in BM on 13 th and 16 th . Nine at Wrocen (BM) and one elsewhere, both on 15 th .	
Snipe Woodcock Black-tailed godwit Redshank Greenshank Dunlin Green sandpiper	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day. Singles in BM on 13 th and 16 th . Nine at Wrocen (BM) and one elsewhere, both on 15 th . Up to a few in BM on three days and one heard in BF on 20 th .	
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Snipe Woodcock Black-tailed godwit Redshank Greenshank Dunlin Green sandpiper Wood sandpiper Common sandpiper Black-headed gull Herring gull	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day. Singles in BM on 13 th and 16 th . Nine at Wrocen (BM) and one elsewhere, both on 15 th . Up to a few in BM on three days and one heard in BF on 20 th . Usually one or two in BM every day. One in BM on 16 th . Up to dozens in BM every day. Many at Bialystok pools (18 th) and at Siemianowka lake on 20 th . One on 13 th .	
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Snipe Woodcock Black-tailed godwit Redshank Greenshank Dunlin Green sandpiper Wood sandpiper Common sandpiper Black-headed gull Herring gull Little tern Common tern Black tern White-winged black tern Whiskered tern Woodpigeon	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day. Singles in BM on 13 th and 16 th . Nine at Wrocen (BM) and one elsewhere, both on 15 th . Up to a few in BM on three days and one heard in BF on 20 th . Usually one or two in BM every day. One in BM on 16 th . Up to dozens in BM every day. Many at Bialystok pools (18 th) and at Siemianowka lake on 20 th . One on 13 th . A pair in BM on 15 th . A pair in BM on two days and a single at Siemianowka lake on 20 th . Many dozens or more in BM on three days. Dominant species at Siemianowska lake on 20 th . Many hundreds at least, every day in BM. Many at Siemianowska lake. Found on three days in BM. Hundreds near Sosnia (BM) on 14 th . Seen in small numbers every day.	
Snipe Woodcock Black-tailed godwit Redshank Greenshank Dunlin Green sandpiper Wood sandpiper Common sandpiper Black-headed gull Herring gull Little tern Common tern Black tern White-winged black tern Whiskered tern Woodpigeon Collared dove	Up to hundreds in BM every day. Up to two or three in BM every day including displaying birds. Single in BF on 18 th . Several in BM every day. Up to a few in BM every day. Singles in BM on 13 th and 16 th . Nine at Wrocen (BM) and one elsewhere, both on 15 th . Up to a few in BM on three days and one heard in BF on 20 th . Usually one or two in BM every day. One in BM on 16 th . Up to dozens in BM every day. Many at Bialystok pools (18 th) and at Siemianowka lake on 20 th . One on 13 th . A pair in BM on 15 th . A pair in BM on two days and a single at Siemianowka lake on 20 th . Many dozens or more in BM on three days. Dominant species at Siemianowska lake on 20 th . Many hundreds at least, every day in BM. Many at Siemianowska lake. Found on three days in BM. Hundreds near Sosnia (BM) on 14 th . Seen in small numbers every day.	
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Swift Not common. Up to several over some towns.

Hoopoe One or two in BM on three days.

Bee-eater Several in a quarry on route for BF on18th.

Black woodpecker Heard in Grzedy protected area (BM) on 16th and heard/seen in BF all 3 days.

Green woodpecker One in BM 14th.

Grey-headed woodpecker One in BF on 20th.

Great spotted woodpecker One in BF on 20th.

Middle spotted woodpecker

White-backed woodpecker

Three-toed woodpecker

One pair at a nest in BF on 19th.

One in a willow in BF on 19th.

A pair at a nest in BF on 18th.

Wryneck One heard/seen in BF on 20th and 21st.

Skylark Heard and/or seen nearly every day in both areas.

Sand martin Recorded on one day in BM. Many dozens in quarry on route for BF.

Swallow Seen in modest numbers every day. House martin Seen every day in BM and one day in BF.

Meadow pipit One or two in BM on 15th.

Tree pipit One or two in Grzedy protected area (BF) on 16th.

Tawny pipit One on ploughed field on route to BF.

White wagtail Seen on most days.

Blue-headed wagtail Seen every day in BM, sometimes several pairs. Seen on two days in BF.

Citrine wagtail A pair and one or two in BM on 15th and 16th respectively.

Wren One or two heard/seen in BM on two days and BF on two days. Not common.

Robin Only a few in BF on two days.

Thrush nightingale Heard every day in BM and BF. Quite common. A few seen closely.

Black redstart A pair + nest at Wrocen guest-house and elsewhere in the village. One near the

guest-house in BF.

White-spotted bluethroat Two at Osowiec (BM) on 14th and heard near Mscichy (BM) on 15th.

Northern wheatear Single seen on two days.

Whinchat One or two in BM on two days and one or two in BF on two days.

Blackbird Seen/heard most days in both areas.

Fieldfare Seen every day in BM and BF. Probably the commonest thrush.

Song thrush Seen/heard in BM (2 days) and BF (3 days).

Mistle thrush Singles in BM on 16th and 17th.

Garden warbler Heard in BM on 14th; maybe overlooked. Not common.

Barred warbler A male seen and heard well in BF on 20th.

Blackcap Seen/heard every day but one.

Lesser whitethroat Heard almost every day. Not uncommon around human habitation.

Whitethroat Seen in BM on four days. Sedge warbler Seen every day in BM.

Aquatic warbler Seen and heard well in Mscichy marsh and Lawaki fen (BM) on 15th and 16th.

Grasshopper warbler Song heard in BM on two days.

River warbler Heard in BF on two days, 19th and 20th and seen well once.
Savi's warbler Heard at Wrocen; heard and seen briefly at Osowiec (BM) on 14th

Marsh warbler Seen and heard well in BF on two days.

Reed warbler Heard at only one place (Bialystok pools) on 18th.

Great reed warbler

Heard and sometimes seen at several places in BM. Several at Bialystok pools. At

BF on most days.

Icterine warbler Heard every day in BM and BF. Willow warbler Heard almost every day in BM.

Wood warbler One or two heard in BM on two days and BF on two days.

Chiffchaff Heard almost every day.

Goldcrest Heard in BF on 19th.

Spotted flycatcher Seen every day in BM and once in BF.

Red-breasted flycatcher

Heard, and seen with difficulty, in Grzedy protected area (BM) on 16th, then a few

heard and briefly seen in BF on 19th and 20th.

Pied flycatcher One heard in BF on 20th.

Collared flycatcher

A few heard and seen well in BF on 19th.

Blue tit

Seen every day in BM and in BF on one day.

Great tit

Seen in BM on three days and in BF on 19th.

Willow tit

Singles seen/heard on 17th and 19th.

Marsh tit A pair plus nest in BF on 19th.

Penduline tit A pair plus a half-built nest at Osowiec (BM) on 14th.

Nuthatch Singles in BF each day.
Treecreeper Single in BF on 19th.

Red-backed shrike A male at a nest-site in BM on 17th. Two or three pairs in BF on two days.

Small numbers seen every day.

Great grey shrike A pair + three juveniles in BM on 17th.

Magpie Small numbers seen every day.

Jay Singles seen almost every day.

Rook Noted in BM on two days and in BF once. Hooded crow Small numbers seen almost every day.

Raven Two to four seen on four days.

Starling Seen every day.

Jackdaw

Golden oriole At least one pair seen in BM on four days and in BF on two days. House sparrow Seen every day. Seen in small numbers almost every day. Tree sparrow Chaffinch Seen every day. A male or pair around the Wrocen guest-house. Singing male in Goniadz. Serin Greenfinch A single or two seen most days. Seen every day; fairly common. Singles or a pair on four days. Goldfinch Linnet Two or three in BM on 14th then four in BF on 19th. Hawfinch Common rosefinch Seen and heard in BM on 16th then singles seen every day in BF. Many seen in BM on most days and a few seen in BF on two days. Reed bunting A male seen and heard well in BM on 15th then one only heard in BF on 19th. Ortolan bunting Yellowhammer Song heard (or a pair seen) every day in BM and BF. Seen and heard well in Wrocen village on 16th and in BF on 19th. Corn bunting

MAMMALS					
Brown/European Hare Lepus europaeus	Red Fox Vulpes vulpes		Roe Deer Capreolus capreolus		
Red Squirrel Sciurus vulgaris	Wild Boar Sus scrofa		Elk / Moose <i>Alces alces</i>		
Beaver Castor fiber	Red Deer Cervus elaphus		European Bison Bison bonasus		
REPTILES AND AMPHIBIANS					
Common Lizard Zootoca vivipara	Fire-bellied Toad Bombina bombina		Common Tree Frog Hyla arborea		
Adder Vipera berus	Grass Snake Natrix natrix		Common Frog Rana temporaria		
Sand Lizard Lacerta agilis	Common Toad Bufo bufo		Edible Frog Rana esculenta		
BUTTERFLIES					
[Common] Swallowtail Papilio machaon	Green Hairstreak Callophrys rubi		Camberwell Beauty Nymphalis antiopa		
Orange-tip Anthocharis cardamines	Small Copper Lycaena phlaeas		Red Admiral Vanessa atalanta		
Brimstone Gonepteryx rhamni	Holly Blue Celastrina argiolus		Peacock Inachis io		
Wood White Leptidea sinapsis	Map butterfly Araschnia levana		Small Heath Coenonympha pamphilus		
			Speckled Wood Pararge aegeria		
DRAGONFLIES AND DAMSELFLIES					
Names in brackets are those in Dijkstra & Lewington					
Azure Damselfly (Azure Bluet) Hairy Dragonfly (Hairy Hawker)					
Blue-tailed Damselfly (C					
OTHER NOTABLE INVERTEBRATES					
Rose chafer Crab spider Misumena vatia			nena vatia		





Above: Common Clubtail (JB); Red Squirrel (TFF). Below: Grass Snake and Edible Frog (TFF).





PLANTS

The nomenclature and systemic order of the plant list generally follows
'The Flora of Vascular Plants in the Bialowieza Forest' by Sokolowski, 1995,
and 'List of Vascular Plants of the Biebrza National Park and the Biebrza Valley' by Werpachowski 2003.

B = Bialowieza National Park Bb = Biebrza National Park Siem = Siemianowka Reservoir
(locations where noted in 2010/2011) NiF: not in flower

	ND ALLIES Lycopodiaceae			
Interrupted clubmoss Lycopodium annotinum Forest in Biebrza, also B				
Common homostail Faviantum anyong	Equisetaceae			
Common horsetail Equisetum arvense	B, Bb			
Water horsetail Equisetum fluviatile	B. Bb and Siem			
Marsh horsetail Equisetum palustre	B, Bb			
Wood horsetail Equisetum sylvaticum	В			
	Hypolepidaceae			
Bracken Pteridium aquilinum	Widespread			
Lady fama Aythy wiy ma filing famaina	Woodsiaceae			
Lady fern Aythyrium filix-femina	B, Bb			
Oak fern Gymnocarpium dryopteris	B, Bb			
	Dryopteridaceae			
Male fern Dryopteris filix-mas	Widespread in forests			
March Form Thelyntoric nelyotric	Thelypteridaceae			
Marsh Fern Thelypteris palustris	B, Bb INOSPERMS Pinaceae			
European larch <i>Larix decidua</i>	Scattered records			
Norway spruce Picea abies	Dominant in wetter forest, co-dominant in drier sites.			
Scots pine Pinus sylvestris	Locally dominant			
luniner luninerus communis	Cupressaceae R Rh Sign understorey			
Juniper Juniperus communis	B, Bb, Siem understorey IS - DICOTYLEDONS Salicaceae			
Black poplar <i>Populus nigra</i> Aspen <i>Populus tremula</i>	B Damp forest/streamsides			
Goat willow Salix caprea	Widespread Red Marsh			
Bay willow Salix pentandra				
Alder Alaye alutiness	Betulaceae			
Alder Alnus glutinosa	Widespread, very common			
Grey alder Alnus incana	B, Bb			
Silver birch Betula pendula	Drier woodland			
Downy birch Betula pubescens	Widespread, esp. Bb			
Hornhoom Carninus hotulus	Corylaceae			
Hornbeam Carpinus betulus	Locally common & B			
Hazel Corylus avellana	B, Bb Fagaceae			
Common oak Quercus robur	Widespread			
Red oak Quercus rubra	Around Bialowieza village			
Neu Oak Quercus rubra	Ulmaceae			
Wych elm <i>Ulmus glabra</i>	B			
vvyon enn ennas glabra	Cannabaceae			
Hop Humulus lupulus	B, Bb			
Tiop Trainide Idpaids	Urticaceae			
Stinging nettle Urtica dioica	Widespread			
Carriging notice crade dicion	Loranthaceae			
Mistletoe Viscum album	Widespread, most on poplar			
	Aristolochiaceae			
Asarabacca Asarum eurpoaeum	В			
riodiabadda riodiani dai poddaini	Polygonaceae			
Bistort Polygonum bistorta	Widespread			
Japanese Knotweed Fallopia japonica	Bb			
Giant knotweed Fallopia sachlinensis	B			
Common sorrel Rumex acetosa	Widespread			
Sheep's sorrel Rumex acetosella	Local			
Curled dock Rumex crispus	Bb			
Water dock Rumex hydrolapathum	Widespread, in leaf			
Broad-leaved dock Rumex obtusifolius	Widespread			
2.522 loavou dook ramon obtaoliolido	Chenopodiaceae			
Fat hen Chenopodium album	Bb (hotel)			
2	Caryophyllaceae			
Field mouse-ear Cerastium arvense	B, Bb			
Common mouse-ear Cerastium fontanum	Widespread			
Sticky mouse-ear Cerastium glomeratum	B, Bb			
Ragged robin <i>Lychnis flos-cuculi</i>	Common in wet meadows			
Annual knawel Scleranthus annuus	Siem			

White campion Silene alba B, Bb Greater stitchwort Stellaria holostea Local at B Common chickweed Stellaria media Widespread

Wood stitchwort Stellaria nemorum B, common in woods

Nymphaceae

Yellow water-lily Nuphar lutea In flower at Bb

Ranunculaceae

Scattered records

Wood anemone Anemone nemorosa Many in seed in woods Marsh marigold Caltha palustris Widespread in leaf

Hepatica Hepatica nobilis

Small Pasqueflower Pulsatilla pratensis

Meadow buttercup Ranunculus acris

Common water crowfoot Ranunculus aquatilis

Fan-leaved water crowfoot Ranunculus circinatus B, Bb B, Bb Lesser celandine Ranunculus ficaria Lesser spearwort Ranunculus flammula Bb Greater spearwort Ranunculus lingua Bb

Multi-flowered buttercup Ranunculus polyanthemos Common in meadows

Creeping buttercup Ranunculus repens Widespread Goldilocks Ranunculus auricomus Wood fringes, Bb Celery-leaved buttercup Ranunculus sceleratus B and Bialystok B, Bb

Thread-leaved water crowfoot Ranunculus

trichophyllus

Mousetail Myosurus minimus Greater meadow-rue Thalictrum aquilegifolium Bb, NiF

Papaveraceae

Great celandine Chelidonium majus Widespread/very common

Bird-in-a bush Corydalis solida Bb

Cruciferae

Garlic mustard Alliaria petiolata Scattered Horse radish Armoracia rusticana Widespread

Shepherd's purse Capsella bursa-pastoris Widespread/common Coralroot bittercress Cardamine bulbifera B, in seed and flower

Large Bitter-cress Cardamine amara В Lady's smock Cardamine pratensis В

Tall Rock-cress Cardaminopsis arenosa Common Whitlowgrass Erophila verna Hedge mustard Sisymbrium officinale

В Field pennycress Thlaspi arvense Scattered Marsh Yellowcress Rorippa palustris Bb

Resedaceae Wild mignonette Reseda lutea Bb

Droseraceae Common sundew Drosera rotundifolia Bb raised bog

Crassulaceae Wall-pepper Sedum acre Widespread

Orpine Sedum telephium Strekowa Gora Saxifragaceae

Alternate-leaved golden saxifrage Chrysosplenium

alternifolium

Grossulariaceae

Redcurrant Ribes rubrum Bialowieza Currant Ribes spicatum? Bb

Lady's mantle Alchemilla mollis + another

Hawthorn Crataegus monogyna Meadowsweet Filipendula ulmaria Widespread in leaf Wild strawberry Fragaria vesca Widespread

Water avens Geum rivale Widespread/common Herb bennet Geum urbanum Widespread/common Hoary cinquefoil Pontentilla argentea

Silverweed Potentilla anserina Widespread

Tormentil Potentilla erecta Widespread/locally abundant

Marsh cinquefoil Potentilla palustris Bogs at Bb and Siem Creeping cinquefoil Potentilla reptans Widespread

Wild cherry Prunus avium Scattered Bird cherry Prunus padus B. Bb Blackthorn Prunus spinosa Scattered Dog rose Rosa canina

Japanese rose Rosa rugosa Naturalised near Hajnowka Raspberry Rubus idaeus Locally common in forests

Stone bramble Rubus saxatilis Bb Rowan Sorbus aucuparia Scattered

Rosaceae

Bh

	Loguminacoo
A hairy broom Chamaecytisus ratisbonensis A hairy broom Chamaecytisus ruthenicus Garden lupin Lupinus polyphyllus Black medick Medicago lupulina False acacia Robinia pseudacacia Spring pea Lathyrus vernus Lesser trefoil Trifolium dubium Zigzag clover Trifolium medium Red clover Trifolium pratense White clover Trifolium repens Tufted vetch Vicia cracca Common vetch Vicia sativa	B and roadsides B and roadsides Naturalised on roadsides B Planted in shelter belts B, Bb B, Siem Bialystok Widespread/common Widespread/common Scattered Widespread
Bush vetch Vicia sepium	Dalamalaaaaa
	Polygalaceaea
Common milkwort Polygala vulgaris	Woods near great snipe lek
Wood sorrel Oxalis acetosella	Oxalidaceae Common in leaf
Wood sorrei Oxalis acetosella	
Common storksbill Erodium cicutarium	Geraniaceae B, Siem
Dusky cranesbill <i>Geranium phaeum</i> Herb robert <i>Geranium robertianum</i> Bloody cranesbill <i>Geranium sanguineum</i> Wood cranesbill <i>Geranium sylvaticum</i>	Abundant on roadsides at B Widespread Local but widespread Widespread
	Euphorbiaceae
Hungarian spurge Euphorbia esula Dog's mercury Mercurialis perennis	Locally common Forest at B
Norway maple Acer platanoides Sycamore Acer pseudoplatanus	Aceraceae Widespread/common Widespread ippocastanaceae
Horse chestnut Aesculus hipocastanum	B
Horse chestilut Aesculus Ilipocastanum	Tiliaceae
Small-leaved lime Tilia cordata	Widespread Guttiferae
Common St. John's-wort Hypericum perforatu	ım In leaf at B
	Balsaminanceae
Touch-me-not Impatiens noli-tangere	В
	Celastraceae
Spindle tree Euonymus europaeus	B, Bb
	Rhamnaceae
Alder buckthorn Frangula alnus	B, Bb
Buckthorn Rhamnus catharticus	Bb
Field a second Viela and and	Violaceae
Field pansy Viola arvensis	В
Heath dog violet <i>Viola canina</i>	В
Marsh violet Viola palustris	В
Wild pansy Viola tricolor	B
Mezereon <i>Daphne mezereum</i>	Thymelaeaceae
wezereon Dapille mezereum	Onograceae
Great willowherb Epilobrium hirsutum	In leaf at B
Evening primrose <i>Oenothera</i> sp.	Roadsides
_ : :g	Cornaceae
Dogwood (red osier) Cornus sanguinea	B, Bb
J (Araliaceae
Ivy Hedera helix	Scattered
	Umbelliferae
Ground elder Aegopodium podagraria Wild angelica Angelica sylvestris Cow parsley Anthriscus sylvestris Caraway Carum carvi Hairy Chervil Chaerophyllum hirsutum Burnet saxifrage sp. Pimpinella sp. Sanicle Sanicula europaea Steppe parsley Peucedanum oreoselinum Water Parsnip Sium latifolium	Widespread/common B, Bb Widespread/common Bb Bb In leaf In flower in forests at B Red Marsh NiF Bb
Day recommend to the state of	Ericaceae
Bog rosemary Andromeda polifolia Heather Calluna vulgaris Labrador tea Ledum palustre Bilberry Vaccinium myrtillus Bog bilberry Vaccinium uliginosum Cowberry Vaccinium vitis-idaea	Raised bog at Bb Widespread/local Raised bog at Bb B, Bb Raised bog at Bb Widespread/local

Dition	ulaaaa			
Water-violet Hottonia palustris	ulaceae R Rh			
Cowslip <i>Primula veris</i>	B, Bb B			
Creeping jenny <i>Lysimachia nummularia</i>	Scattered records			
Chickweed wintergreen <i>Trientalis europaea</i>	Local in forest at B, Bb			
Northern androsace Androsace septentrionalis	Bb, fortress walk			
Plumbaginaceae				
Thrift Armeria maritima	Locally at B			
	aceae			
Ash Fraxinus excelsior B, Bb				
Menya	nthaceae			
Bogbean Menyanthes trifoliata	Bogs at Bb			
	iaceae			
Crosswort Cruciata laevipes	В			
Cleavers Galium aparine	Scattered			
Sweet woodruff Galium odoratum	Abundant in forest at B			
Marsh bedstraw Galium palustre	B, Bb Ivulaceae			
Field bindweed Convolvulus arvensis	Bb			
	oniaceae			
Jacob's ladder <i>Polemonium caeruleum</i>	B, Bb, very locally common			
	ginaceae			
True alkanet Anchusa officinalis	Widespread/locally common			
Corn gromwell Buglossoides arvensis	Arable weed, B			
Viper's bugloss <i>Echium vulgare</i>	Widespread			
Water forget-me-not Myosotis scorpiodes	В			
Common comfrey Symphytum officinale	Local at B and Bb			
Field Forget-me-not Myosotis arvensis				
Changing forget-me-not Myosotis discolor	Red Marsh			
	ichaceae			
Water-starwort sp. Callitriche sp.	Waterways at B			
	piatae			
Bugle Ajuga reptans Common hemp-nettle Galeopsis tetrahit	B D Dh			
Ground ivy Glechoma hederacea	B, Bb B			
Yellow archangel <i>Lamiastrum galeobdolon</i>	Along roadsides, Bb			
White dead-nettle <i>Lamium album</i>	Bialystok			
Red dead-nettle Lamium purpureum	В			
Water mint Mentha aquatica	B, Bb			
Hedge woundwort Stachys sylvatica	B, NiF			
Selfheal <i>Prunella vulgaris</i>	Widespread			
	naceae			
Bittersweet Solanum dulcamara	Scattered records			
	ulariaceae			
Toothwort Lathraea squamaria	Bb strict reserve			
Common cow-wheat Melampyrum pratense	Bw			
Marsh lousewort <i>Pedicularis palustris</i> Yellow rattle <i>Rhianthus minor</i>	B, Bb			
Common figwort Scrophularia nodosa	B, Bb, NiF			
Blue water speedwell Veronica anagallis-aquatica	Bb in ditches			
Brooklime Veronica beccabunga	Widespread in ditches			
Germander speedwell Veronica chamaedrys	Widespread/abundant			
Thyme-leaved speedwell Veronica serpyllifolia	В			
Plantaginaceae				
Ribwort plantain Plantago lanceolata	Widespread			
Greater plantain Plantago major	Widespread			
Hoary plantain Plantago media	Bb			
	foliaceae			
Common elder Sambucus nigra	Widespread			
Guelder-rose Viburnum opulus	B, Bb			
	anaceae			
Marsh valerian <i>Valeriana officinalis</i>	Bb B Bb			
Common valerian Valeriana officinalis	B, Bb			
Dipsacaceae Field scabious Knautia arvensis Scattered records				
	Inulaceae			
Rampion sp. <i>Phyteuma</i> sp.				
	positae			
Wormwood Artemisia absinthium	Scattered records			
Field southernwood Artemisia campestris	B, Bb			
Mugwort Artemisia vulgaris	Widespread			
Yarrow Achillea millefolium	Widespread			
Daisy Bellis perennis	Scattered			

Pineapple-weed Matricaria discoidea Scattered Creeping thistle Cirsium arvense Scattered Locally common Marsh thistle Cirsium palustre Marsh hawksbeard Crepis paludosa Alder swamp forest Hemp agrimony Eupatorium cannabinum Widespread in leaf Marsh cudweed Gnaphalium uliginosum

Sand everlasting Helichrysum arenarium Sandy soils at Bb Mouse-ear hawkweed Hieracium pilosella Locally common Cat's-ear Hypochoeris radicata Scattered Nipplewort Lapsana communis In leaf at B Scattered

Ox-eye daisy Leucanthemum vulgare Heath groundsel Senecio sylvaticus Scattered Marsh fleawort Senecio congestus Bb Groundsel Senecio vulgaris

Tansy Tanacetum vulgare Bialystok

Dandelion Taraxacum officinale Widespread, in seed

Goat's-beard Tragopogon pratensis

Lentibulariaceae Bladderwort Utricularia sp. Bh

MONOCOTYLEDONS Alismataceae

Water plantain Alisma plantago-aquatica Leaves noted

Hydrocharitaceae

Frog-bit Hydrocharis morus-ranea B, Bb

Water soldier Stratoides aloides Many in flower locally at Bb

Iridaceae

Yellow flag Iris pseudacorus Widespread/common

Araceae Bog arum or white calla Calla palustris

Sweet flag Acorus calamus Leaves locally common at Bb

Liliaceae

Ramsons Allium ursinum B strict reserve Lily of the valley Convallaria majalis Locally numerous May lily Maianthemum bifolium Locally numerous

Herb Paris Paris quadrifolia B and Bb Solomon's seal Polygonatum multiflorum В

Angular Solomon's seal Polygonatum odoratum В

Gramineae (incomplete) Meadow Foxtail Alopecurus pratensis

Grey hair-grass Corynephorus canescens Red Marsh

Cock's-foot Dactylis glomerata Widespread/common Widespread/common Red Fescue Festuca rubra Timothy Phleum pratense Common, also fodder crop

Common reed Phragmites australis Locally dominant Rye Secale cereal Locally naturalised

Lemnaceae

Common duckweed Lemna minor B, Bb Ivy-leaved Duckweed Lemna trisulca Bb Potamogetonaceae

A pondweed Potamogeton sp. (P. praelongus?) Bb

yphaceae Great reedmace ('bulrush') Typha latifolia Widespread

Lesser reedmace Typha angustifolia

Cyperaceae (many not identified)

White Sedge Carex canescens Bb Large yellow sedge Carex flava Bb

Tufted-sedge Carex elata Often abundant in sedge-marsh, Bb

Common cotton-grass Eriophorum angustifolium Bogs at B and Bb Hare's-tail cotton-grass Eriophorum vaginatum Bogs at B and Bb Wood club-rush Scirpus sylvaticus Widespread

Juncaceae (incomplete)

Hairy wood-rush Luzula pilosa

Heath wood-rush Luzula multifida

Orchidaceae

Broad-leaved Marsh-orchid Dactylorhiza majalis Near lady's slipper site, Bb

Common twayblade Listera ovata Bb Bird's-nest orchid Neottia nidus-avis B, Bb Lady's slipper Cypripedium calceolus Rh

Many fungi and lichens, especially at Białowieża, not identified.