

Appeal raised by the PAS President and Polish University Rectors

The removal of dead spruce trees from natural forest stands is doing violence to the best preserved forest in Europe – write Prof. Jerzy Duszyński, President of the Polish Academy of Sciences, Prof. Wojciech Nowak, Rector of the Jagiellonian University in Kraków, Prof. Marcin Pałys, Rector of the University of Warsaw, and Prof. Jan Szmidt, Rector of Warsaw University of Technology.

The Białowieża Forest is a precious national treasure, recognized the world over as a symbol of nature in our country. It is a point of pride and that is why with full conviction, as a country, we sought to have it listed as a World Heritage site. These efforts were common to us all, and yielded success. We have a duty to strive to preserve the unique character of the Białowieża Forest. We are categorically opposed to the Białowieża Forest being treated as an ordinary forest. The forest-management actions being taken there could bring about irreversible losses. It will take thousands of years for these wounds to heal.

Unlike human-planted forests, there is no known case in history when a natural forest was permanently destroyed by any pest. Such tree stands may, at most, experience transformations. But we do know of many painful cases in which a natural forest was destroyed by mankind. The Białowieża Forest represents just 3.4% of Poland's forest resources. We should maintain its condition as determined by nature alone. Researchers from around the world will study its condition, as they have for decades. The climate is warming, presumably there are now too many spruce trees in the Forest, so we should let nature partially replace them with other tree species. By removing dead spruce trees from the natural forest stands that comprise nearly half of the Białowieża Forest, we do violence to the best preserved forest in Europe, whereas by leaving them in the human-impacted fragments of the Forest, we accelerate their return to natural condition.

We appeal for the immediate cessation of tree cutting in the Białowieża Forest.

10 July 2017

PAS Position Statement on the Białowieża Forest

“The Polish Academy of Sciences urges for a coherent strategy to be worked out for the protection of the Białowieża Forest, above all taking account of the facts and findings of scientific research. We also declare our intent to take part in monitoring the biodiversity and forest-shaping processes in Białowieża” – such is the appeal raised in a statement signed by Prof. Jerzy Duszyński, President of the Academy, together with 142 members of the Academy.

Of all the forests of on the European continent, the Białowieża Forest is the closest to the original primeval state and therefore ranks among the most precious natural sites in Europe.

The people living within the forest itself and its nearby buffer zone frequently have contradictory needs, expectations and interests. For years now, it has been a problem that numerous forms of overlapping protective regimes apply to the Białowieża Forest (as a whole or parts thereof), including regulations pertaining to: 1. the Białowieża National Park itself and 2. the Polish State Forest areas under the supervision of three different Forest Inspectorates (including: a. as one of the twenty-three nature reserves in Poland, b. as part of the Natura 2000 European Ecological Network, c. as a transboundary “Man and the Biosphere” International Biosphere Reserve, d. as a UNESCO World Natural Heritage Site, e. as a protected landscape zone, and f. as the “Białowieża Forest” Promotional Forest Complex). One potential hope for simplifying this intertwined set of social and natural complexities could involve working out a uniform set of legal regulations that will protect the Białowieża Forest effectively while also enjoying the support of the local community.

The Polish Academy of Sciences points out that unequivocal scientific premises have yet to be put forward, demonstrating the necessity of taking sanitation measures in order to protect the biodiversity of the Białowieża Forest. On the other hand, numerous researchers have doubts about refraining from taking any measures to intervene in natural forest-shaping processes, including those provoked by the outbreak of bark beetles.

Given such a situation of uncertainty about which of the scientific approaches should be implemented at the Białowieża Forest, a dispute is currently playing out in the field of attitudes and values. Two noble attitudes – one concerned for the forest as a forest, the other concerned for its primeval nature – are here in conflict. In line with the former stance, the whole zone of the Białowieża Forest has been subject to human influence for centuries and it has therefore changed significantly from its original natural character. As such it should be subject to the appropriate forest-management measures, including sanitation cutting of trees and logging of wood. In line with the latter stance, on the other hand, the Białowieża Forest has indeed preserved its natural character (including in areas outside the National Park and reserves) and so the types of measures appropriate for commercial forest management should not be applied there, especially involving any use of heavy equipment – neither now nor in the future. A majority of us find this second stance closer to our own. The open and harsh conflict over the proper management of the Białowieża Forest is harming Poland’s image in Europe.

The Polish Academy of Sciences therefore urges for a coherent strategy to be worked out for the protection of the Białowieża Forest, above all taking account of the facts and findings of scientific research. We also declare our readiness and intent to take part in monitoring the biodiversity and forest-shaping processes in the Białowieża Forest. Moreover, we are in favor of significantly enlarging the territory of the Białowieża National Park.

Jerzy Duszyński, President of the Polish Academy of Sciences, together with the following members of the Academy:

Jan Albrecht, Jan Awrejcewicz, Jerzy Axer, Grzegorz Bartosz, Romuald Będziński, Andrzej Białas, Piotr Biler, Barbara Bilińska, Szczepan Billiński, Piotr Bizoń, Grażyna Borkowska, Jerzy M. Brzeziński, Janusz Marek Bujnicki, Andrzej Buko, Tadeusz Burczyński, Witold Cęckiewicz, Agnieszka Chacińska, Grzegorz Chałasiński, Tadeusz Chmielniak, Andrzej Cierieszko, Anna Członkowska, Stanisław J. Czuczwar, Jerzy Dera, Tomasz Dietl, Dariusz Doliński, Józef Dubiński, Jerzy Dził, Stanisław Filipowicz, Władysław Findeisen, Elżbieta Frąckowiak, Andrzej Friszke, Zbigniew Jerzy Galus, Robert R. Gałązka, Jacek Gawroński, Z. Maciej Gliwicz, Michał Glowiniński, Stanisław Gomulka, Tomasz Grodzicki, Krzysztof Haman, Jarosław Olav Horbańczuk, Ryszard Horodecki, Adolf Horubala, Adam Hulanicki, Hubert Izdebski, Andrzej Jajszczyk, Barbara Jarzab, Bogumił Jeziorski, Leszek Kaczmarek, Tadeusz Kaczorek, Roman Kaliszan, Marian P. Kaźmierkowski, Jan Kiciński, Jan Kiszyński, Michał Kleiber, Jerzy Kołodziejczak, Maria Magdalena Konarska, Marek Konarzewski, Józef Korbicz, Małgorzata Kossowska, Małgorzata Kossut, Bożena Kostek, Włodzimierz Krzyżosiak, Wojciech Kostowski, Adam Kotarba, Jan Kotwica, Piotr Kowalik, Eugeniusz Kozaczka, Jan Kozłowski, Jacek Kuźnicki, Zbigniew Kwieciński, Rafał Latała, Andrzej B. Legocki, Janusz Limon, Jerzy Limon, Janusz Lipkowski, Jerzy Lis, Adam Łomnicki, Bogusław Major, Stefan Malepszy, Krzysztof Malinowski, Jacek Marecki, Stanisław Massel, Józef Modelski, Michał Mrozowski, Zenon Mróz, Karol Myśliwiec, Krzysztof Narkiewicz, Edward Nęcka, Henryk Okarma, Grzegorz Opolski, Hubert Orłowski, Wiesław W. Pawlik, Zygmunt Pejsak, Stanisław Penczek, Marek Pfütznier, Mariusz Piskula, Wiesław Pleśniak, Ryszard Pohorecki, Stefan Pokorski, Edmund Przegaliński, Ewaryst Rafajłowicz, Stanisław Rakusa-Suszczewski, Henryk Ratajczak, Antoni Rogalski, Czesława Rosik-Dulewska, Paweł Rowiński, Witold Rużyło, Andrzej Rychard, Zdzisław Lech Sadowski, Marian Saniewski, Józef Smak, Andrzej Sobolewski, Kazimierz Strzałka, Józef Szudy, Michał Szulczewski, Henryk Szymczak, Marek Świtoński, Andrzej Trautman, Marian Saniewski, Józef Smak, Andrzej Sobolewski, Kazimierz Strzałka, Józef Szudy, Michał Szulczewski, Henryk Szymczak, Marek Wolfe, Piotr Węgleński, Grzegorz Węgrzyn, Andrzej Więcek, Jerzy Wilkin, Lech Wojtczak, Stanisław L. Woronowicz, Andrzej K. Wróblewski, Jerzy Zabczyk, Romuald Zabielski, Jacek Zaremba, Marek Zembala, Adam Zięcik, Andrzej Żelaźniewicz, Jan Franciszek Zmudziński, Maciej Żylicz

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Letter to the journal *Science*

Evidence in favor of active measures to protect biodiversity is weak, at best – write Professors Marek Konarzewski, Romuald Zabielski, Rafał Kowalczyk and Jerzy Duszyński in a letter published in the journal *Science*

In his News Feature “Last Stands” (8 December 2017, p. 1240), E. Stokstad describes the fierce conflict over the protection of Europe’s most primeval forest area, the Białowieża Forest, now facing an outbreak of the spruce bark beetle (*Ips typographus*). The question of how to respond to this outbreak boils down to deciding whether active measures should be taken to protect biodiversity, or whether it should be allowed to evolve solely by natural processes, including periodic bark beetle outbreaks. We agree with Stokstad that the above question is essentially one of values and, as such, lies beyond the scope of the natural sciences. However, the use of sanitary and salvage logging as measures of biodiversity protection should certainly rest on solid scientific evidence – yet a research conference recently organized by the Polish Academy of Sciences, bringing together top researchers in the field, has shown that evidence in favor of such measures is weak, at best (1).

This conference brought to light a general lack of controlled, replicated studies concerning the efficacy of efforts to contain bark beetle outbreaks by means of sanitary logging in lowland old-growth forests. Although the Polish State Forests administration managing the Białowieża Forest has recently initiated such study by establishing a “reference” area, its soundness is questionable because it lacks proper replication (2). Study design issues are further complicated by the Białowieża Forest’s mosaic of protected and managed tree stands. Bark beetles spread rapidly, so it remains unclear whether sanitary logging limited to unprotected areas can restrain the outbreak (3). Relevant meta-analyses are also scant and those currently available actually point to adverse effects of salvage logging on biodiversity (4, 5).

The above methodological weaknesses must be urgently tackled, preferably by large-scale, replicated studies. In the Białowieża Forest, this can only be achieved through trans-border collaboration with the Belarusian side, which manages two-thirds of the tree stands. The Polish and Belarusian Academies of Sciences have already started collaboration on this issue (1). We surely need to learn the right lessons from the current outbreak, given that the next one will inevitably come; with the encroachment of global warming, outbreaks are occurring with increased frequency (6).

9 Feb 2018

1. Managing the bark beetle outbreak in the Białowieża Primeval Forest (2017). <https://www.youtube.com/watch?v=ffCDBAp24sk>.
2. L. Fahse, M. Heurich, *Ecol. Model.* 222, 1833 (2011).
3. S.H. Hurlbert, *Ecol. Monogr.* 54, 87 (1984).
4. S. Thorn et al., *J. Appl. Ecol.*, 10.1111/1365-2664.12945 (2017).
5. A. Chaudahary et al., *Sci. Rep.* 6, 23954 (2016).
6. R. Seidl, *BioScience* 64, 1159 (2014).