



Warfare dendrochronology – Trees as witnesses of the Tirpitz attacks

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We use Norwegian pine and birch trees as witnesses of the attacks to the Tirpitz during World War II for assessing the ecological implications beyond historical documents. The Tirpitz was the largest battleship of the German Kriegsmarine during World War II. With a length of 250 m and a crew capacity of ~2500 men it is still the largest battleship ever built by European navy. From 1942 onwards, the ship spent her time in Norway to act as a deterrent against an Allied invasion. The Tirpitz was rarely involved in operational deployments and thus called “Lonely Queen of the North”. However, as she posed a constant threat to Allied convoys in the Barents Sea, she was also called “The Beast”.

“The destruction, or even the crippling, of this ship is the greatest event at sea at the present time. No other target is comparable to it.” Winston Churchill, January 25, 1942

Moving from one fjord to another the Tirpitz was attacked on several occasions by Royal Navy miniature submarines and carrier based aircraft. In 1944, the Tirpitz was anchored at the Kåfjord close to Alta (Norway), where she was attacked by several Royal Air Craft bombers trying to sink the battleship. Among other actions of defense, the Nazis used artificial fog to hide the ship. These smokescreens caused severe damage to the trees surrounding the Kåfjord, and we present physical and chemical evidence in the rings of pine and birch to document the environmental impact of these battles.