

- ²³⁷ CörlBO WD 12 October (1982); FOA Tape 0-11. Protocol for the speaker channel on the tapes recorded at Mälsten 11-28 October 1982 (FOA 0-4 at 11-14 October) made by Chef MUSAC Peter Gnipping June 2001 for Ambassador Rolf Ekéus Submarine Inquiry, The Ekéus Inquiry Files, National Archives, Stockholm. See also the tape 'FOA 1' between 18 and 22 minutes (each tape is 60 minutes).
- ²³⁸ 'Uppdrag granskning', *Swedish TV 1*, 11 June 2008; Tunander (2009), Chapter 5.
- ²³⁹ Tunander (2009), <http://file.prio.no/files/projects/Spelet%20under%20ytan/Spelet-under-ytan.pdf>
- ²⁴⁰ Porpoise Class, Boat Database, <http://www.rnsubs.co.uk/Boats/BoatDB2/index.php>
- ²⁴¹ Tunander (2013), pp. 264-265.
- ²⁴² Conversations with Anders Karlsson (after 2000).
- ²⁴³ Tunander (2009), Chapter 5; see also the tape 1c from 12 October 1982 on our web page. The tape recordings from the Swedish submarine incident on 11-14 October 1982 were made on five tapes ('0', '1', '2', '3' and '4'). The recordings were made on the island of Mälsten at the exit from the Muskö naval base. They used five hydrophones with a distance of 100-150 meters between each of them. We have here only presented the recordings from hydrophone no. 3 (sound channel 3 on the tape), because of the amount of information that has to be downloaded. Tape 1c is about 35 minutes long. It starts with an almost ten minute long recording of a twittering sound that, according to the documents, is supposed to start at 16:30. After that a comment follows on the speaker channel saying that 'it is 17:50 ...probable submarine'. After that, follows a 26 minute long recording with a lot of noise, thuds, metallic sounds and sounds from rudders and hydraulic valves. At 18:00, the sonar operator says to the staff at Mälsten that he is recording a 'submarine' or 'certain submarine'. Analysis made by specialists after 2007 also shows that this is a 'certain submarine' recorded very close to the hydrophones. At 18:07 (after 26 minutes and 33 seconds on 'Tape 1c') one can hear a hydraulic valve closing, a distinct double metallic sound, "Keke", that makes it possible to define the exact position of the valve and the submarine to be in between hydrophone no. 1 and 2, about 80 meters from hydrophone no. 2 (the sound appears first in no. 2, then 6 milliseconds later in no. 1, 67 milliseconds later in no. 3, and 150 milliseconds later in no. 4). When you know the position of the hydrophones you can also calculate the position of the source of the sound. However, we have not identified any propeller sounds. The submarine is most likely gliding slowly, going very slowly with the propellers, close to the hydrophones. There is a lot of noise from the submarine, particularly from 18:00 to 18:16. After that the sonar operator changes the tape. The speaker channel on tape 2 starts with: 'continued recording of submarine. Four minutes for changing the tape'. To listen to the tape, one has to download the program Audacity 1.3, open this program and then open each file through this program <http://audacity.sourceforge.net/download/>. Tape 1c is found at the following link: http://www.prio.no/upload/people/ola_tunander/sound_files/Band.1_3.zip
- ²⁴⁴ Private archive.
- ²⁴⁵ See tape 1a: <http://file.prio.no/files/projects/Spelet%20under%20ytan/Spelet-under-ytan.pdf>; Tunander (2009), Ch. 5, pp. 220-22.
- ²⁴⁶ Report from the diving and monitoring of the sea-floor after the Hårsfjärden incident 6 March 1983; "Chefen för 6 Minröjningsavdelningen Dick Börjesson till chefen för marinen Per Rudberg, Rapport efter genomförda sökåtgärder i STOCKHOLMS skärgård samt i HARSFJÄRDEN i samband med ubåtsincident, handläggare MS/Und Örlkn N-O Jansson och C6mröjvjd tjänsteställe, Kn K Pejdel, 6 March 1983" (partly declassified 22 September 2008); Tunander (2009), Ch. 3, pp. 105-58.
- ²⁴⁷ Tunander (2009), Ch. 5, pp. 105-58.; Tunander (2013).
- ²⁴⁸ Tunander (2009), Ch. 3, pp. 126-28.
- ²⁴⁹ Submarine Photo Archive: Avalon (DSRV-2) <http://www.navsource.org/archives/08/08546.htm>
- ²⁵⁰ Tunander (2013).
- ²⁵¹ Chefen för 6 Minröjningsavdelningen Dick Börjesson (1983).
- ²⁵² Chefen för 6 Minröjningsavdelningen Dick Börjesson (1983).
- ²⁵³ For more details, see: <http://file.prio.no/files/projects/Spelet%20under%20ytan/Spelet-under-ytan.pdf>
- ²⁵⁴ Tunander (2009), Ch. 5, pp. 237-40.
- ²⁵⁵ General Lennart Ljung, *Aftonbladet*, 13 October 1982.
- ²⁵⁶ Chief of Navy, Per Rudberg's Diary, 14 October 1982. This section was shown in the *Swedish TV 1*, 'Uppdrag granskning', 11 June 2008.
- ²⁵⁷ Ulf Larsson, notes 21 October 1982.
- ²⁵⁸ Ulf Adelsohn, *Partiledare – Dagbok 1981-1986* [Diary of the Conservative Party Leader Ulf Adelsohn 1981-86] (Malmö: Gedins Förlag 1987) p. 97.