

## Status Report Review

**Title:** Status Review of Atlantic Wolffish (*Anarhichas lupus*)

**Author(s):** Atlantic Wolffish Biological Review Team

---

### General Comments:

The Atlantic Wolffish Biological Review Team (BRT) has conducted a very complete review of the available information on the Atlantic Wolffish (*Anarhichas lupus*). The report generally provides a comprehensive, well written review of the life history and biology of the Atlantic Wolffish including information on taxonomy, species description, life history traits, diets and recruitment. The report further provides a review of the available information on the genetic population structure, habitat preference and distribution and abundance of Atlantic Wolffish.

Overall, the BRT report on the status of Atlantic Wolffish is a well written document that includes all the available information on this species. Moreover the conclusions of the BRT are generally sound given the available information on this species.

### Specific Comments:

- ▶ In general please include the scientific name with the first use of all species names.
- ▶ Pg. 5, Longevity and Growth, Para. 1, "...captured animals **ranging** in size from **.003m.....and .004**" are these values correct?
- ▶ Pg. 7, Longevity and Growth, Para. 3. "...scuba observations off the coast of **Nova Scotia...**". Keats et al 1986 conducted work off the coast of Newfoundland not Nova Scotia
- ▶ In relation to the review of genetically distinct populations.
  - Pg. 10, last para. McCusker et al 2008 reference missing from literature cited
  - Imsland et al 2008 reference missing from literature cited
  - Should be clearly stated that Imsland et al investigated Spotted Wolffish and not Atlantic Wolffish
  - McCusker et al 2008 (Journal of Fish Biology 72, 375–385) does not investigate genetic variation in Atlantic Wolffish across the North Atlantic, therefore if the reference to McCusker and colleagues (Pg.10, last para) is referring to new unpublished research, it should be clearly stated.
  - Imsland et al 2008 sampled Spotted Wolffish from the Gulf of St. Lawrence, therefore they could and did not find similar patterns of distinct populations in the Eastern Grand Banks and Western Atlantic Canada. Furthermore, Imsland et al found the main differentiation was between the

Barents Sea populations and other Atlantic populations (differences between east and west were less significant). As well, there were distinct differences between Canadian samples derived in different seasons from the same area which confounded the conclusions for Spotted Wolffish.

- Therefore, based on the available genetic information it is unclear if the species delineation is supported.
- ▶ In relation to the status of Canadian Distribution and Abundance,
  - Simpson and Kulka (2002, Canadian Science Advisory Secretariat Research Document 2002/78 located at [http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2002/2002\\_078\\_e.htm](http://www.dfo-mpo.gc.ca/csas/Csas/publications/ResDocs-DocRech/2002/2002_078_e.htm)), provide information on the abundance and biomass of Atlantic Wolffish on the southern Grand Banks and St. Pierre Bank from 1971. This information is lacking in the current review.
  - In addition, J. M. Casey (2000) presented a Masters thesis to Memorial University of Newfoundland “Fish Community changes in an Exploited Marine Ecosystem: Newfoundland Southern Grand Bank and St. Pierre Bank, 1951-1995”) in which she found that trends in abundance of Atlantic wolffish increased on St. Pierre Bank from 1951-1970 then subsequently declined, whereas on the southern Grand Banks Atlantic Wolffish biomass from 1951-1995 increased steadily. This pre-1971 data has not been presented elsewhere and is important in that it covers a period of time prior to widespread occurrence of large freezer trawlers.
  - Note of caution: Most studies which discuss “Canadian” survey results on the Grand Banks summarize survey data which extends beyond the Canadian Exclusive Economic Zone. Therefore they are not uniquely Canadian waters but also include international waters in the indices of abundance/biomass.
- ▶ Literature Cited – please review and revise.
  - Multiple fonts are used, spacing,
  - Use one standard format
  - Barsukov is out of order
  - Keats et al 1986, create an “a” and “b”, include pg range for Keats et al Can. J. Zool. 64:1920-1925.
  - Ensure literature Cited is complete (see above, genetic analysis)