

Lack of age data - background

fish5103growth Modelling length at age and length distributions

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Poor data is no excuse

Lack of age readings does not change the issue:

- The population dynamics are the same
- The problem simply becomes harder
- Poor methods result in poor data
- Need better methods with poor data
- Should attempt to get better data

Missing age readings

- Can often get growth from modes
- Can often use statistical methods to convert to age
- Can often use models of population dynamics and fit to length data
- Important: Can often get some (recruitment) data

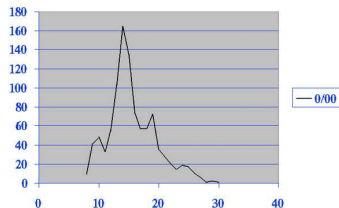


Figure : Length distribution of Northern shrimp, *Pandalus borealis*, in parts per thousand (0/00) in each 1mm carapace length group, from a sample taken in Icelandic waters.

Catch curve analysis etc. need catches in numbers at age. Sometimes, only data on length is available. It may be possible to see age groups as peaks. Or the length data may be modeled directly.

Cohort slicing

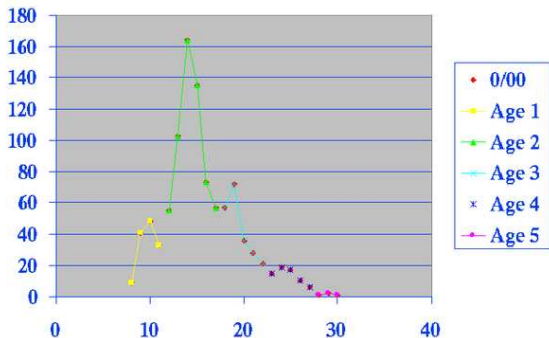


Figure : A length distribution is sliced by assigning length groups surrounding a mode to an age group.

Slicing is done by grouping length classes into age groups.

Smoothing and interpolation

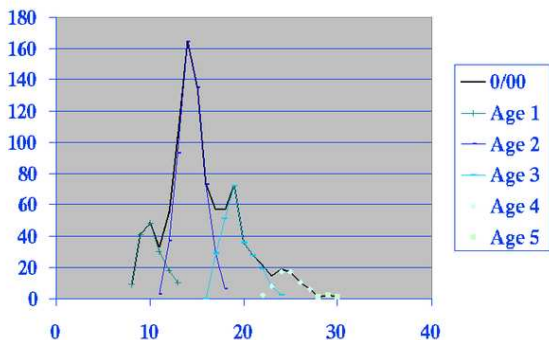


Figure : Simple visual smoothing methods can be used to guesstimate the fraction of each length group to go into each age group (not recommended).