Modelling the development of a length distribution

fish5103growth Modelling length at age and length distributions

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A length distribution

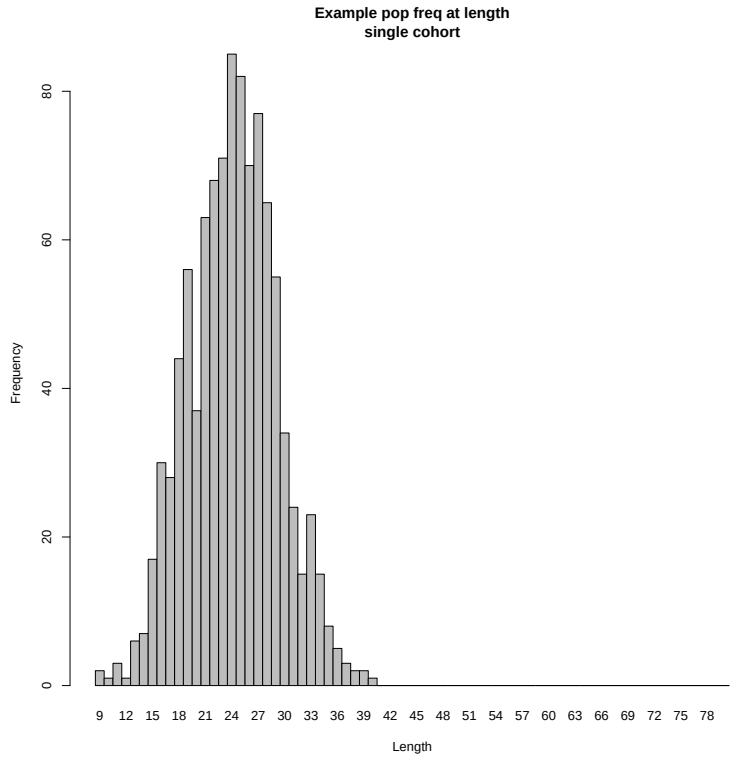

Figure : A simulated length distribution.

A growth curve

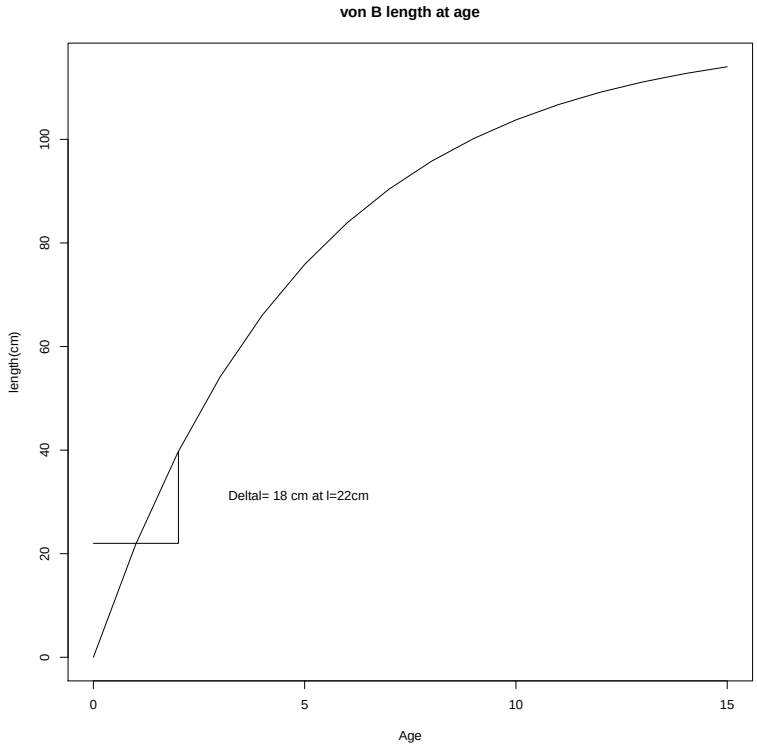

Figure : An example of a von Bertalanffy growth curve.

The updating distribution

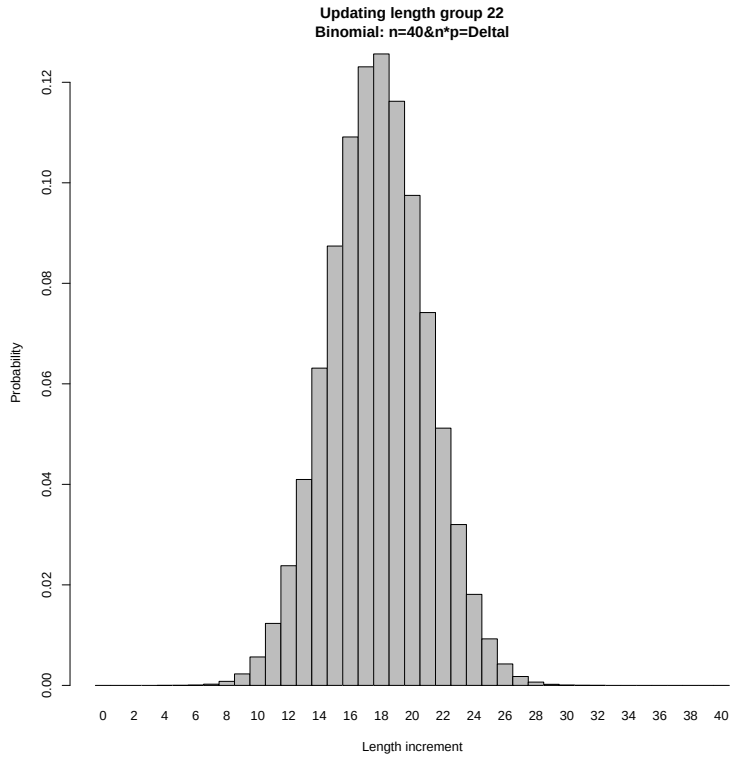

Figure : The updating distribution describes the frequency of movements from a fixed length cell into other cells.

Growth from length at age

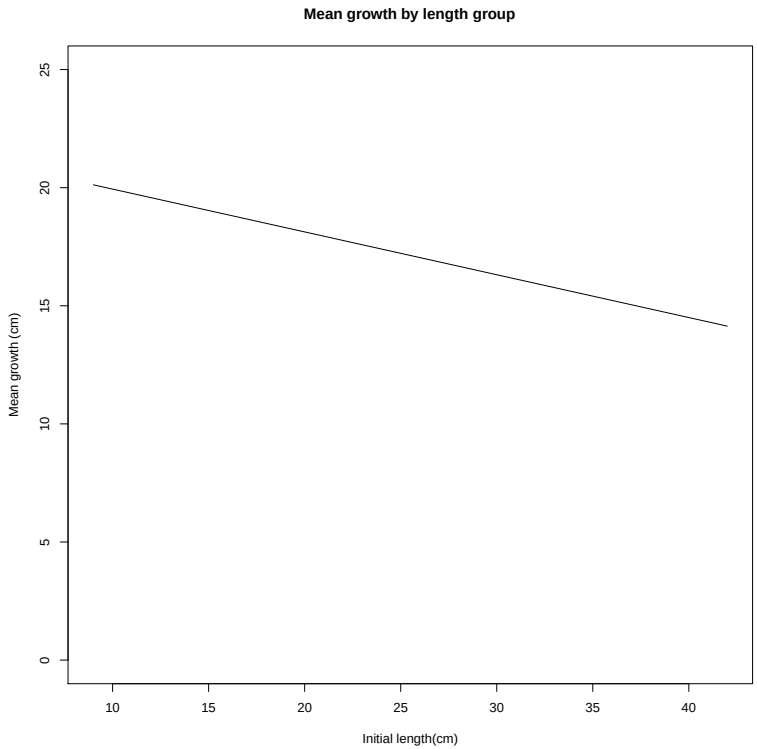

Figure : Varying initial lengths will correspond to different growth under the von Bertalanffy growth curve.

An updated length distribution

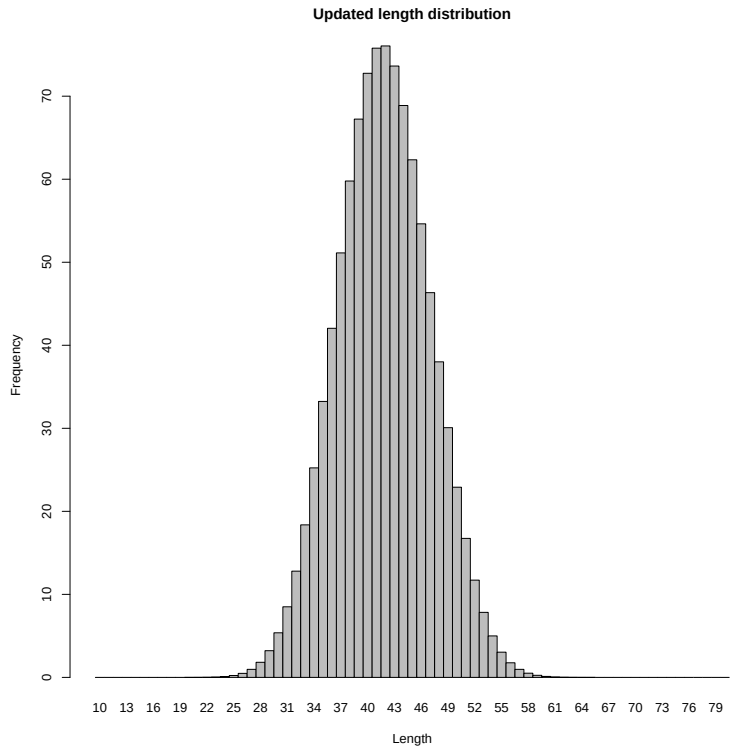

Figure : The simulated data transforms into a smoother length distribution since each target length group contains a sum of parts from several other length groups.

The update as a shifting smoother

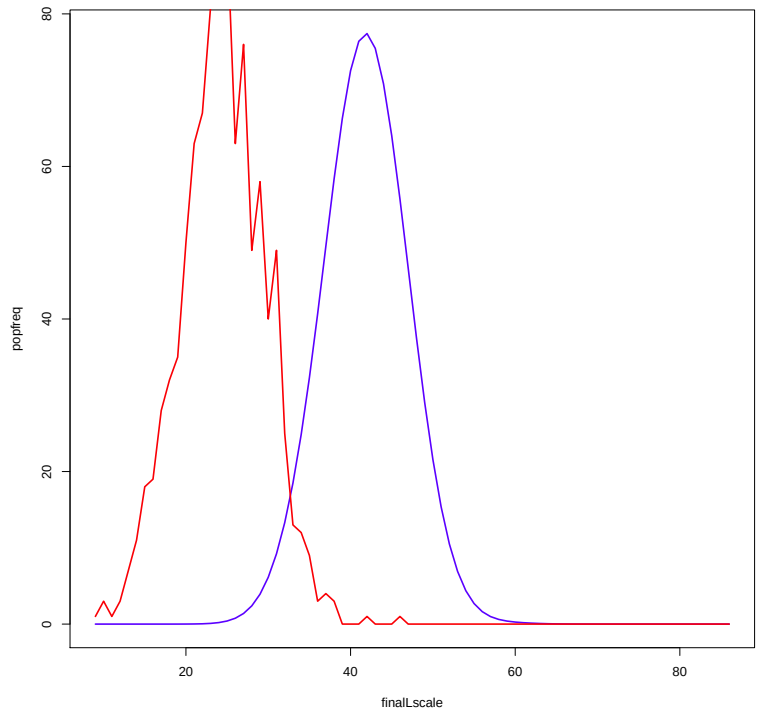

Figure : Notice how the updating mechanism shifted and smoothed the initial length distribution.

An example of an updating model

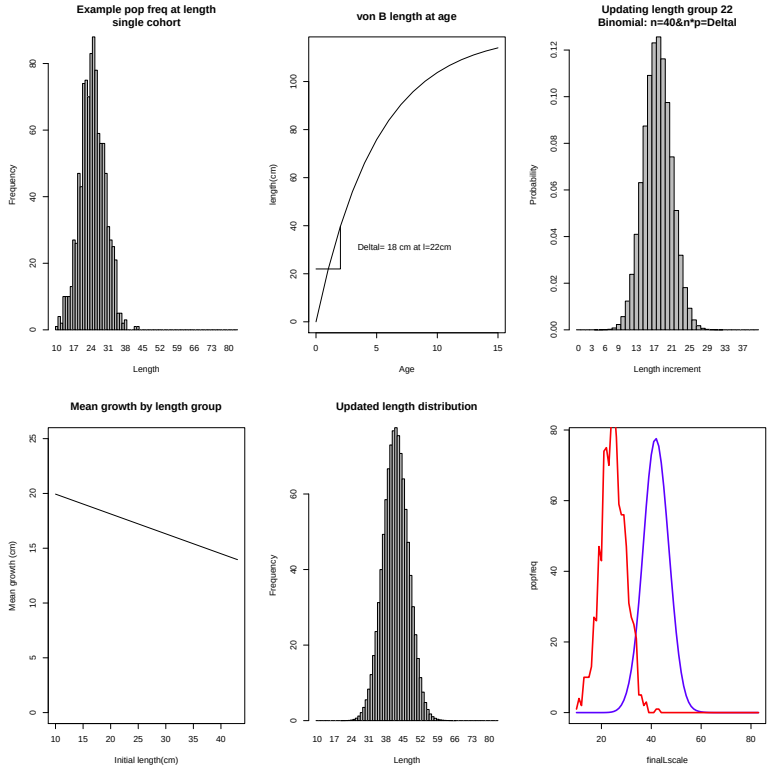

Figure : Caricature of an update mechanism

The update mechanism in Gadget (caricature).