

Direct ageing of the SBT caught by Taiwanese longliners in 2018-2020

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In this report, I updated the results of the SBT direct ageing, which were caught by Taiwanese longliners in 2018-2020. The SBT otoliths examined herein were collected by Taiwanese observers on the longline vessels and also from the tuna processing factories in Kaohsiung harbor, Taiwan. Fig. 1 shows the fork length distribution of the SBT that otoliths were examined. The fish collected for direct ageing were predominantly between 90-120 cm with very few fish < 80 cm or > 130 cm. The direct ageing data are shown in Fig. 2. The fish examined among these three years were mainly at ages 2-5 years, contributing to 92% in 2018, 80% in 2019 and 78% in 2020. It is worthy to note that the sample size in 2019 and 2020 are much smaller than that used in 2018. When more fish caught in 2019 and 2020 were aged, percentage of young fish at age 2-5 years is expected to increase. For the SBT caught in 2018, their direct ageing data and fork length are used to construct an age-length key that shows the proportion of ages for each 10 cm fork length interval of the fish. The age-length key is further used to convert the length data of all SBT catch in 2018 to the age composition. As the result shown in Fig. 3, the total catch of the SBT caught by Taiwanese longliners in 2018 were predominantly at age 2-5 years (>80%), which is similar to the direct ageing result as shown in Fig. 2. The sample sizes for direct ageing in 2019 and 2020 are insufficient to construct an reliable age-length key, therefore the age composition of the total catch in 2019 and 2020 are not reported in this document. More otoliths will be aged for the SBT caught in 2019 and 2020 and the age data will be updated next year.

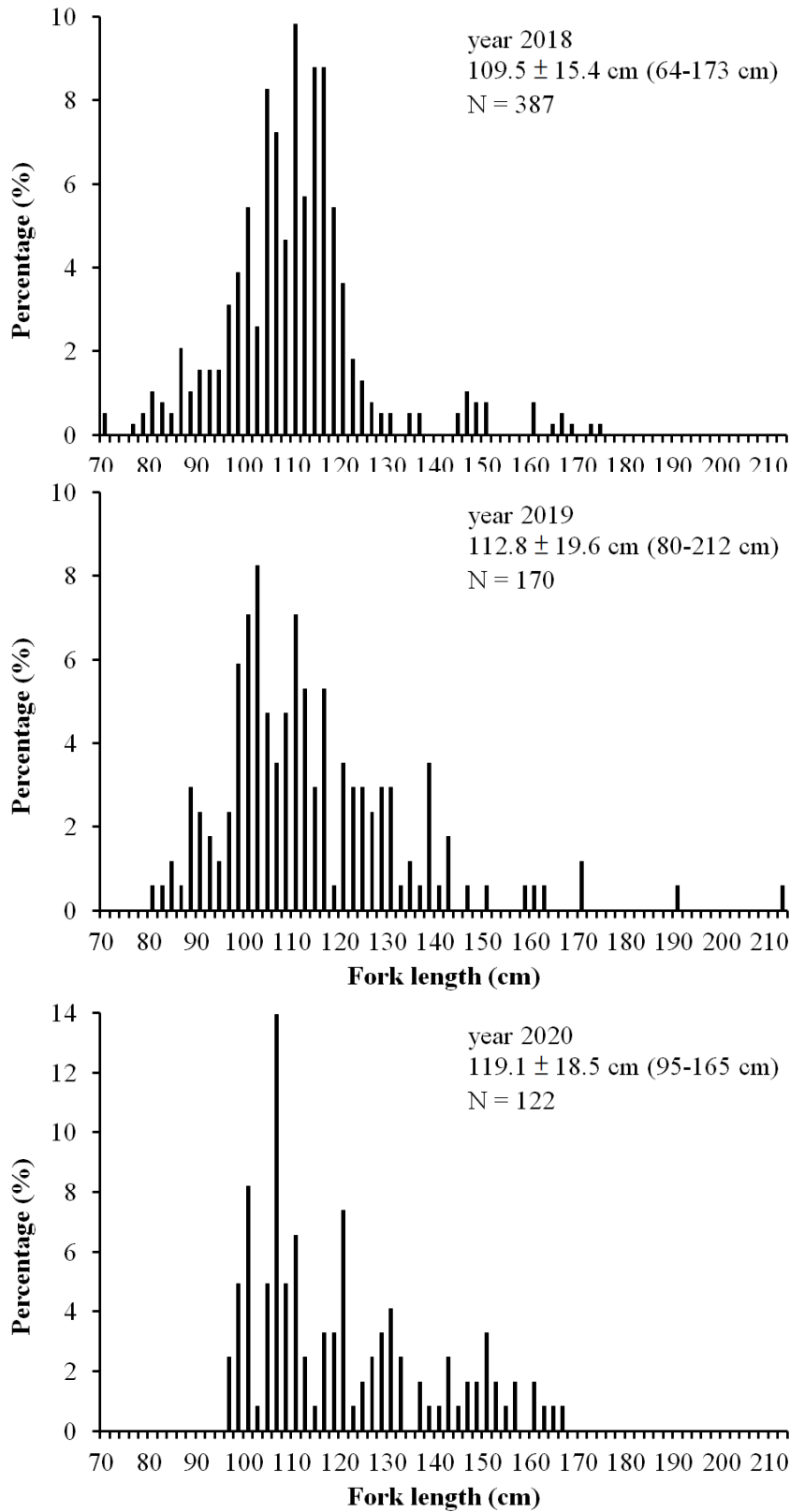


Fig. 1. The length distribution of the SBT that were used for age estimation.

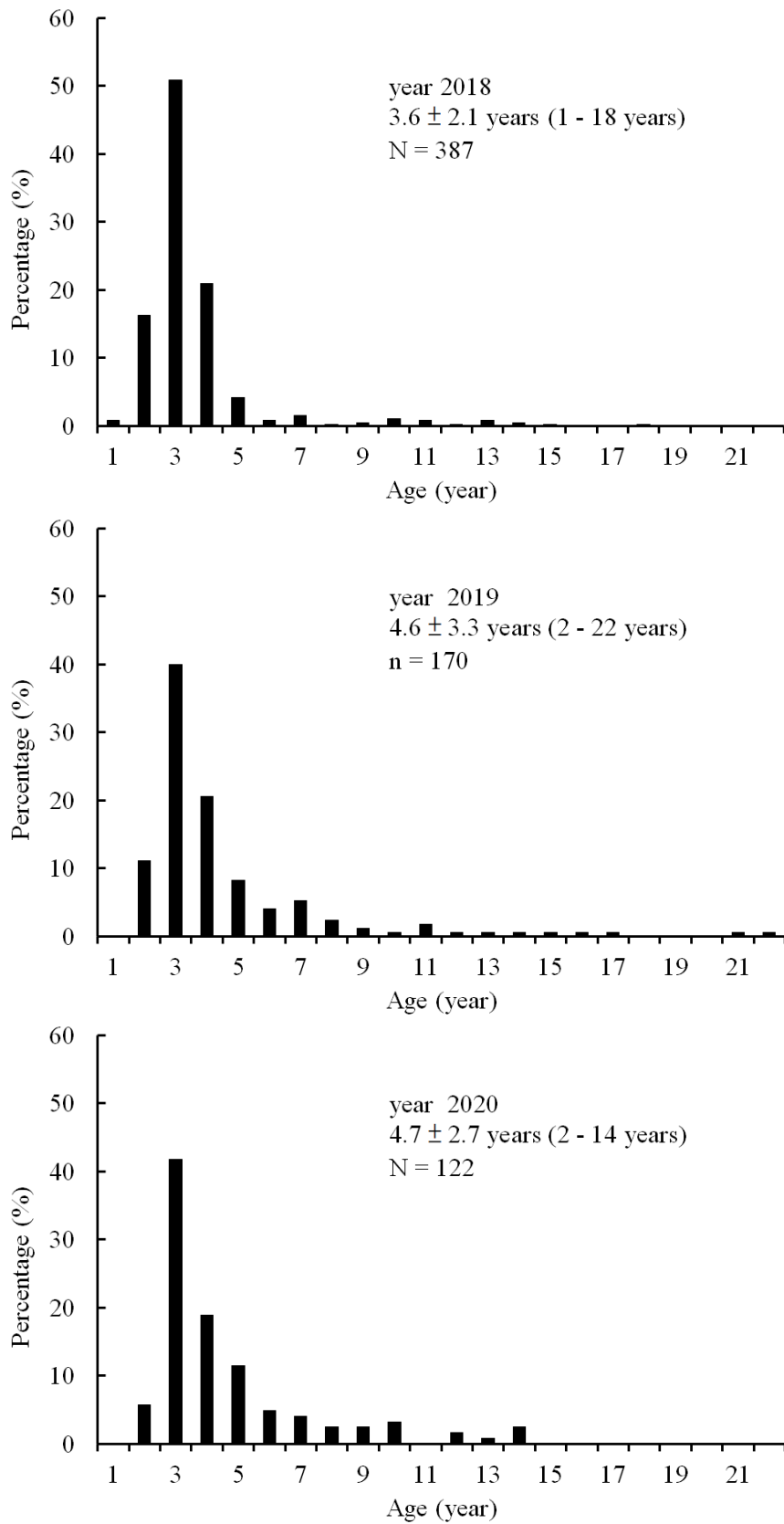


Fig. 2. The age composition of the SBT based on the otolith direct ageing.

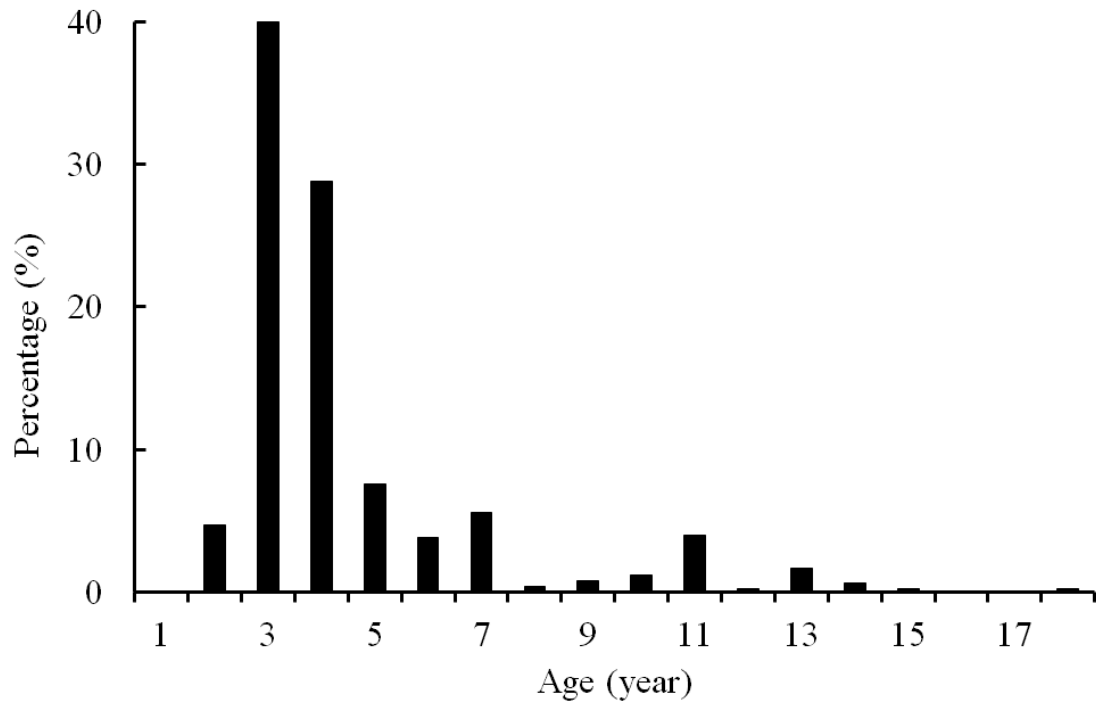


Fig. 3. The estimated age composition of the total SBT caught by Taiwanese long-liners in 2018.