Southern Bluespotted Flathead (*Platycephalus speculator*)

Stock Structure and Biology

The stock structure of southern bluespotted flathead in Victorian waters is unknown. In Western Australian waters this species can live to at least 12 years and grow to 90 cm TL. Southern bluespotted flathead mature (50 percent) at 1–2 years (males 25 cm, females 32 cm), are highly fecund and have a moderate growth rate. Their main spawning period is spring/summer in marine bays and coastal waters. There is another closely related species, also named blue spotted flathead (*Platycephalus cearuleopunctatus*) reported to occur from southern Queensland to eastern Victoria. This species is not thought to contribute to the fishery in Corner Inlet-Nooramunga, however, there has been no recent assessment of the species composition of catches to confirm this perception.

Management/Assessment Unit

The Victorian component of the southern bluespotted flathead population supports a commercial fishery in Corner Inlet-Nooramunga. Commercial harvests from Port Phillip Bay have been negligible since 2016, when the removal of netting was instigated. Since 2017/18 the commercial harvest of southern bluespotted flathead was virtually all taken from Corner Inlet-Nooramunga (Figure 77). There are also recreational fisheries for this species in Port Phillip Bay, Western Port and Corner Inlet but there is no information of recent landings.

Assessment Summary

For this assessment, the status of the southern bluespotted flathead population was evaluated using:

- Nominal CPUE trends for mesh net and seine net methods in the Corner Inlet-Nooramunga, noting that prior to 2020 there appears to have been poor identification of this species as few were reported from Corner Inlet-Nooramunga.
- Commercial catch and effort.
- Standardised recreational CPUE from creel survey in the Port Phillip Bay recreational fishery (reference period 1998–2015).

This assessment found:

- *Fishing pressure* – Commercial harvests of southern bluespotted flathead have been almost entirely taken from Corner Inlet-Nooramunga since 2015/16 and have increased by approximately 10 tonnes from 2016/17 to 2020/21 (Figure 77) in response to increases in CPUE and greater mesh net effort (Appendix 2). The reported catches of southern bluespotted flathead from Corner Inlet-Nooramunga during the last five years are the highest reported since 1978, noting that the very low harvest earlier in the time series is due to poor species-specific reporting. Prior to 2015/16 at least half of the reported annual state wide commercial harvest of blue spotted flathead came from Port Phillip Bay (Figure 77). The recent increase in harvest from Corner Inlet-Nooramunga represents a notable increase in fishing pressure.
- *Biomass* – Creel survey CPUE in PPB shows an overall declining trend since 2010 (Figure 78). CPUE for mesh net and seine net in Corner Inlet-Nooramunga have displayed similar patterns of variation since 2000, and both, while variable, have generally increased through time (Figure 79a, b), though mesh net CPUE has roughly

halved since historic highs in 2008/09 and 2009/10. However, it must be noted that poor species level reporting may influence CPUE early in the time period. Recreational CPUE from Port Phillip Bay has been variable with the GAM suggesting that overall, there has been a decline through time with the most recent year being below the reference period average.

Stock status summary: The recent increases in CPUE for both mesh and seine nets might be reflecting an increase in biomass in Corner Inlet-Nooramunga. However, increased mesh net effort has likely been associated with increased targeting of flathead species and this may be influencing the upward trends in mesh net CPUE. Continued increases in mesh net effort and catch of southern bluespotted flathead would be expected to eventually precipitate a decline in CPUE, and this may be the reason for the recent three-year declining trend in mesh net CPUE. There are several uncertainties around the harvest and commercial CPUE time series among the different flathead species in Corner Inlet. In particular, the accuracy of species and effort reporting. Uncertainty in catch history for southern bluespotted flathead makes it difficult to assess the risk associated with the recent historically high harvests, and primarily for this reason, there is uncertainty about stock status of southern bluespotted flathead in Corner Inlet-Nooramunga.

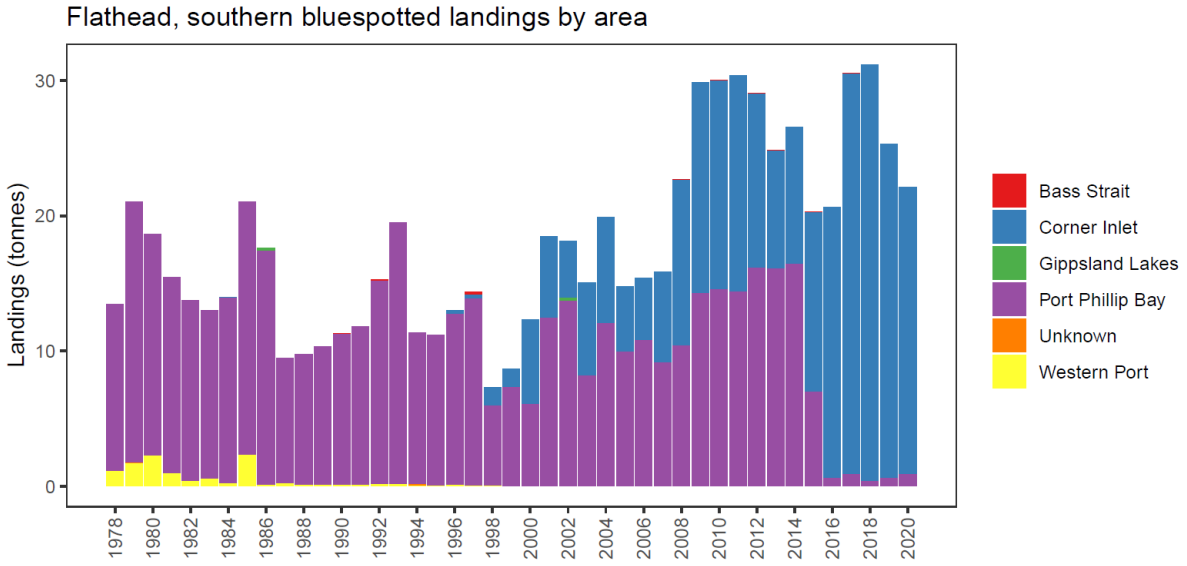

Figure 77 Total commercial catches of southern bluespotted flathead by area in Victorian waters, financial years 1978–2020.

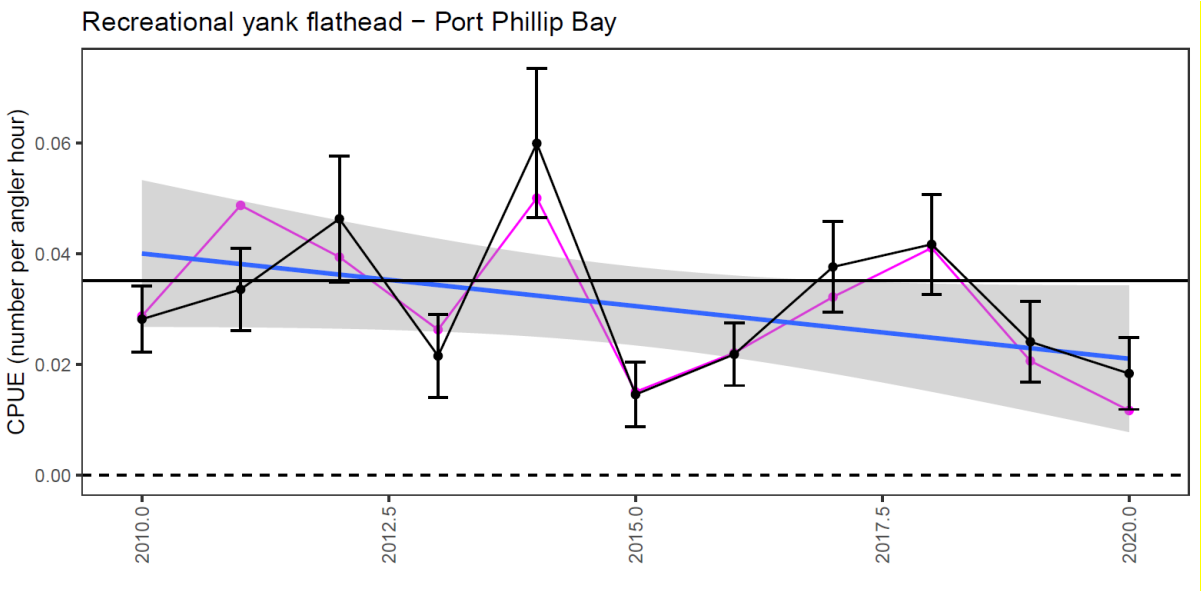

Figure 78 Creel southern bluespotted (yank) flathead CPUE during 2010-2020 standardised (GLMM) for geographic area, season and category of angler.

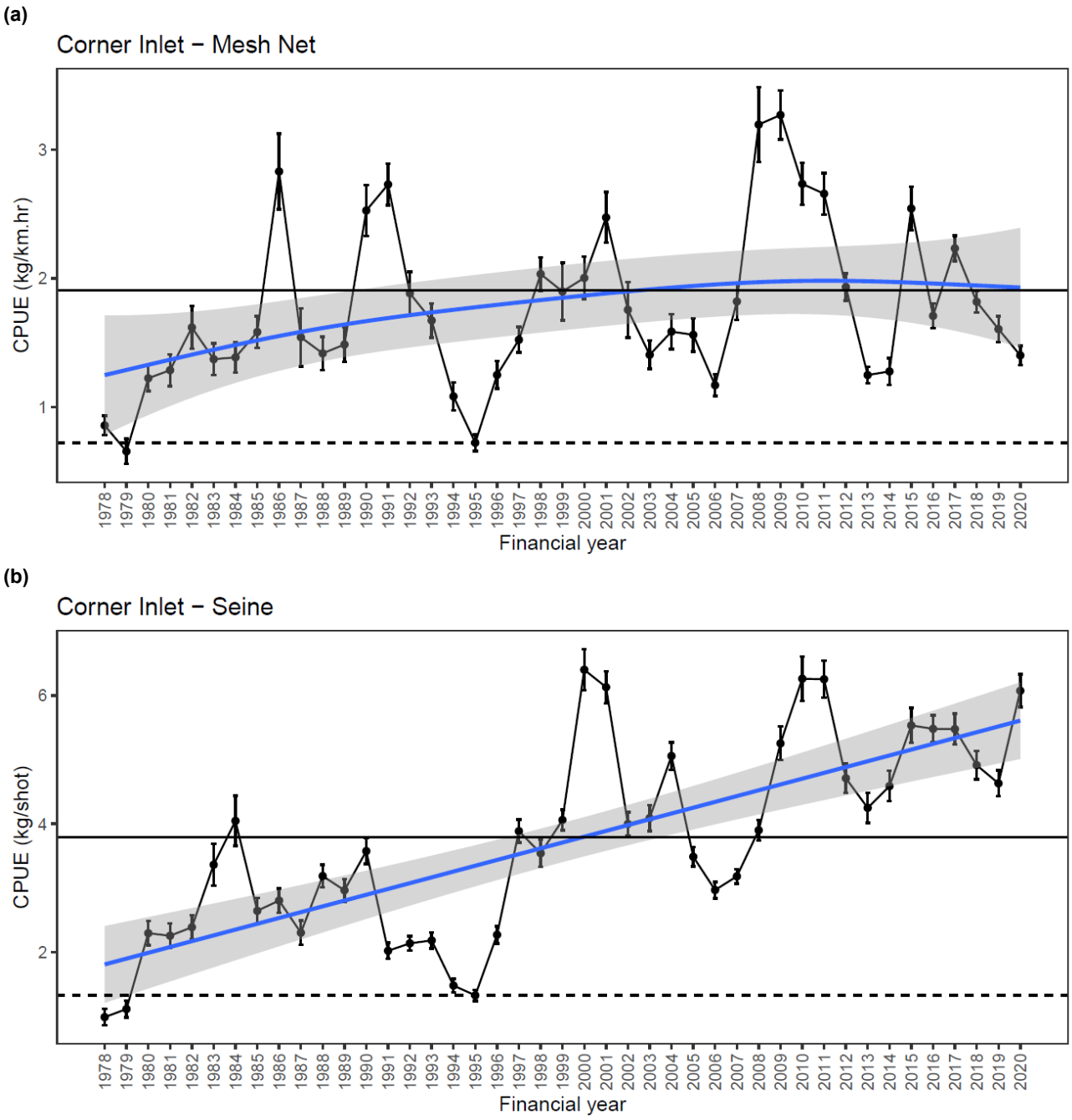

Figure 79 Catch-per-unit-effort (CPUE) (±SE) of southern blue spotted flathead (a) commercial mesh net and (b) commercial seine net Corner Inlet-Nooramunga (financial years 1978–2020). Blue line is a generalised additive model (GAM) of the standardised CPUE trend with the shaded grey area representing the 95% confidence interval of the GAM. Horizontal black line is the mean standardised CPUE during the reference period and the dashed black line is the minimum standardised CPUE within the reference period.

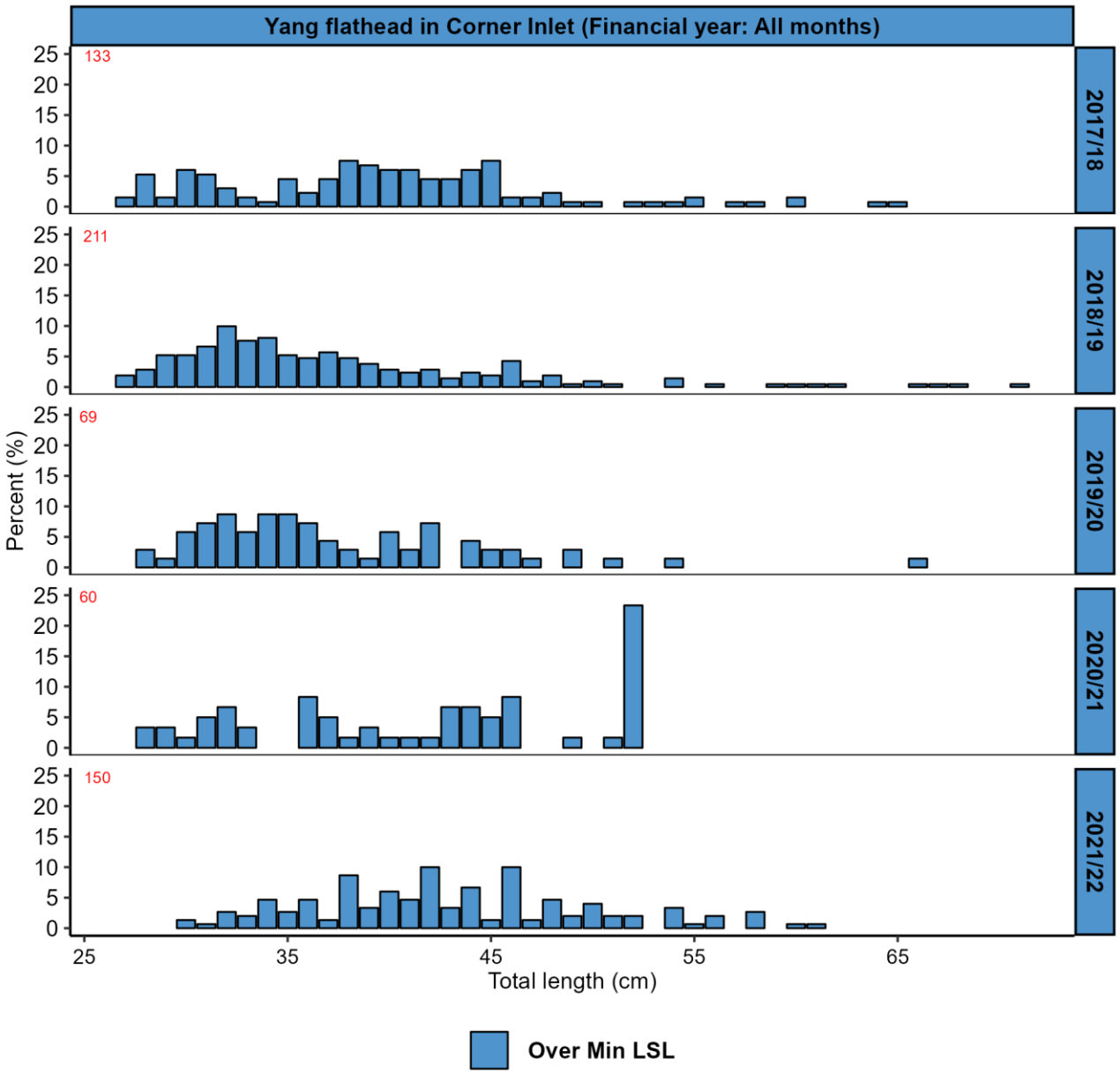

Figure 80 Frequency histograms of Corner Inlet recreational fishery southern bluespotted flathead creel survey length composition. Red numbers indicate numbers of fish measured. LSL = legal size limit.