

# Level of introgression from farmed escaped salmon in PA3 and PA4 compared to the rest of Norway

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## Background

It is estimated that an average 14-36% of the spawning salmon in Norwegian rivers are escaped farmed salmon.

Farmed Atlantic salmon were originally derived from populations of wild Norwegian salmon strains but have ever since changed genetically due to artificial selection.

Introgression between farmed and wild salmon is a cause for concern as it may affect the fitness of wild populations.

**Object:** Is the effect of introgression from farmed escapees higher in PA 3 and PA 4 than in the rest of Norway?

**Introgression:** genetic material from one species is introduced into the gene pool of another through hybridization and reproduction.

**Pind:** proportional ancestry for the individual to the domesticated reference populations (level of introgression).

## Method

The data set used comes from Bolstad et al. (2021) and consist of scale samples from 6926 wild adult Atlantic salmon captured from 105 rivers in Norway.



Figure 1: Map of production areas along the Norwegian coast.

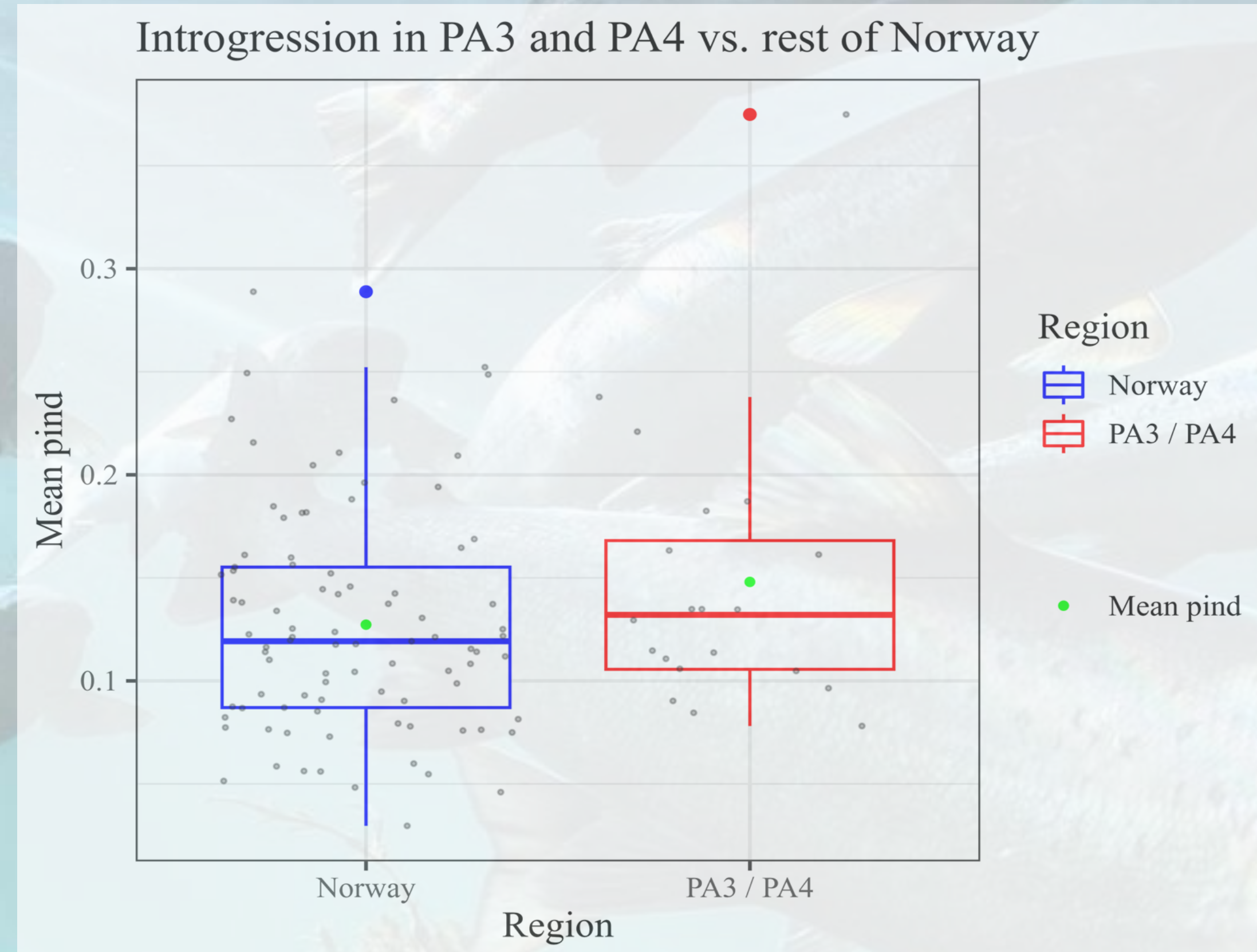


Figure 2: The figure shows that both median and mean level of introgression is slightly higher in production area 3 and 4 compared to the rest of Norway. PA3 and 4 has outliers with greater deviation from the mean.

Table 1: The table shows the calculated values mean pind, standard deviation, maximum and minimum pind, for both PA3/4 and for the rest of Norway.

Region	Mean pind	Standard deviation	Max pind	Min pind
Norway	0.1272713	0.0537747	0.2888333	0.0296667
PA3 / PA4	0.1480231	0.0692220	0.3748437	0.0781009

## Conclusion

The results indicates that wild salmon in PA3 and PA4 have a greater level of introgression in wild populations compared to the rest of Norway.

## References

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