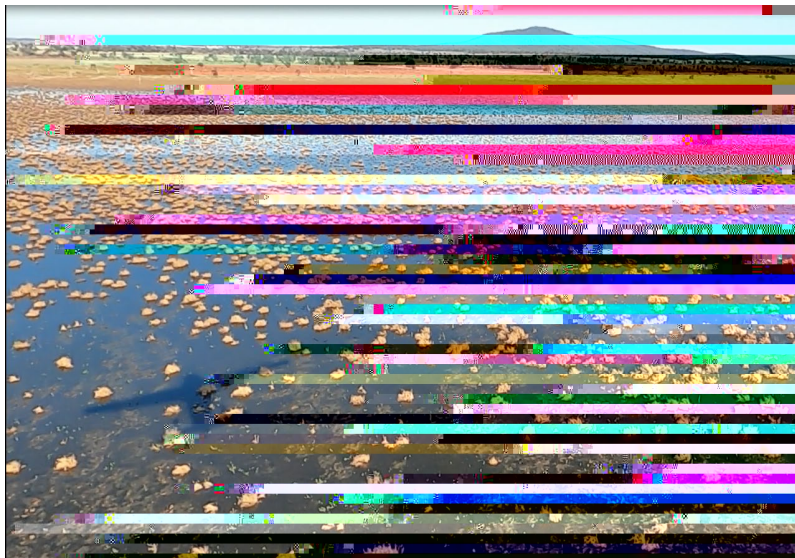


Aerial Survey of Wetland Birds in Eastern Australia - October 2020 Annual Summary Report

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K. Brandis²**

Department of Planning Industry & Environment



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Ford, Matt Davis and Daniel Simpson for support, data management, graphics and quality assurance.
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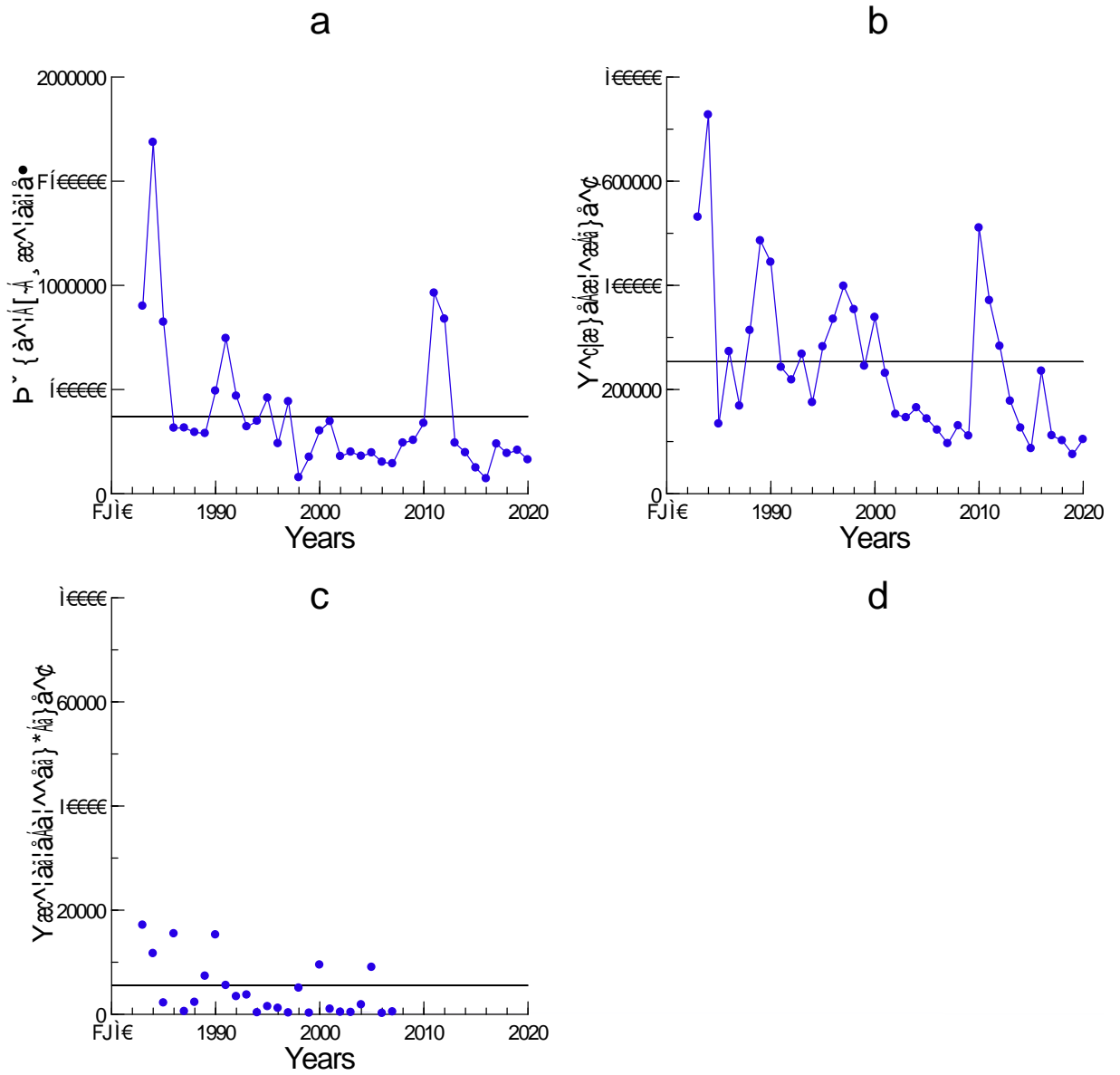


Figure 1 $\hat{Y}_{t|T}^{\text{c}} \{ \hat{A}_{t|T}^{\text{c}} \}$ and $\hat{Y}_{t|T}^{\text{c}} \{ \hat{A}_{t|T}^{\text{c}} \}$ -term averages.

Figure 2 $\text{E}\ddot{\text{A}}\ddot{\text{O}}\ddot{\text{a}} \cdot \text{c} \text{I} \ddot{\text{a}} \sim \text{c}\ddot{\text{a}} [\text{ } \ddot{\text{A}} [\sim \ddot{\text{A}} , \text{æc}^{\wedge} \text{I} \ddot{\text{a}} \ddot{\text{a}} \text{I} \ddot{\text{a}} \ddot{\text{æ}} \ddot{\text{a}} \sim \text{ } \ddot{\text{a}} \ddot{\text{æ}} \} \&^{\wedge} \text{E}\ddot{\text{A}} \ddot{\text{a}} \text{I}^{\wedge} \ddot{\text{a}} \ddot{\text{a}} \} * \ddot{\text{A}} \ddot{\text{a}} \} \ddot{\text{a}}^{\wedge} \phi \ddot{\text{A}} \ddot{\text{æ}} \} \ddot{\text{a}} \ddot{\text{A}}$

Figure 3 ÈÁÁÔ@æ} *^•Áâ}Áæà~}âæ}&^•Á[-Á, æc^!àâ!á~} }&câ[}æ|Á!^•] []•^Á
*! [~]•ÁÇÖ~Mâ~&\•LÁÚâM]â•&âç[!^•LÁP^M@^!àâç[!^•LÁÚ@M•@[!^!àâ!á•LÁ
ŠæM|æi *^Á, æââ} *Áâ!á•DÁ [ç^!Ácâ { ^Áin the Eastern Australian Waterbird
Ù~!ç^!ÁÇFJ)H-G€G€DÈ

Figure 4. Decadal changes in indices including total abundance, $\sum_{i=1}^n \{ \frac{1}{n} \sum_{j=1}^n \frac{1}{n} \sum_{k=1}^n \dots \}$ in the Eastern

Table 3.

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Figure 5 ÈÁÖä • c i ä à ~ c ä [} Áæ } ä Áæ à ~ } áæ } & ^Á [-Á , æc ^! à ä i! á • Á in the
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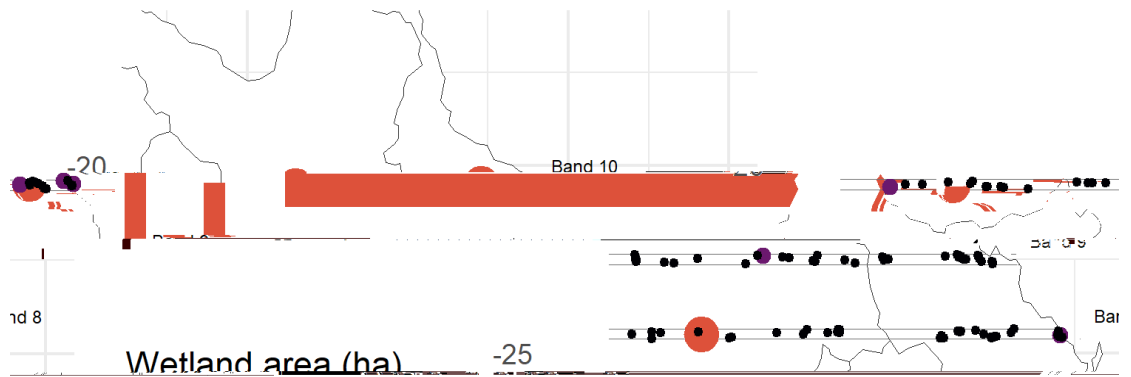


Figure 7 2020 Eastern
 Wetland area (ha) -25
 Band 10
 rd 8

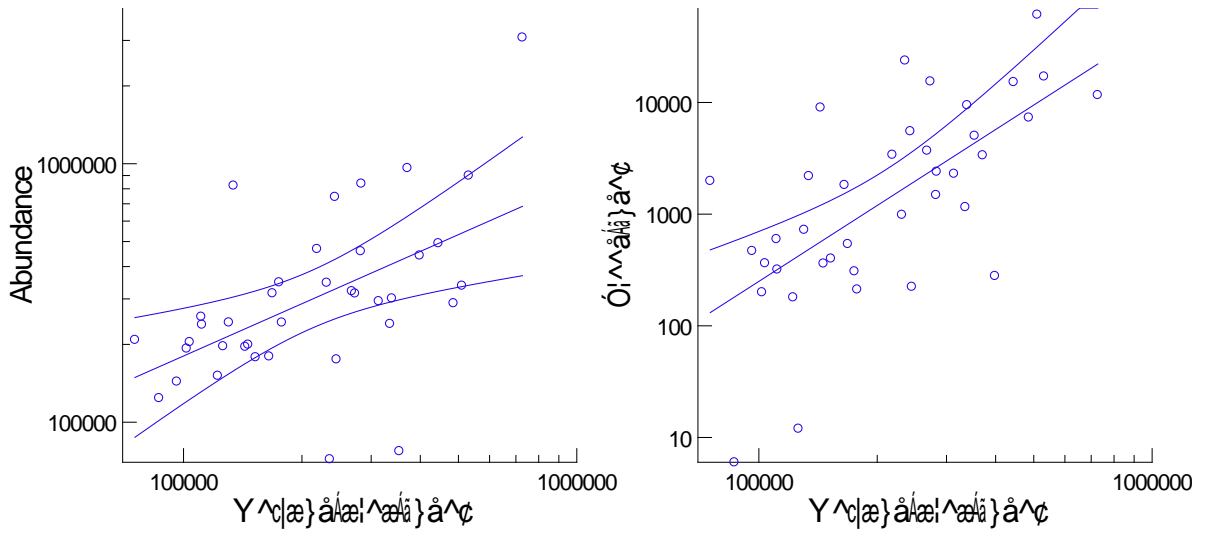


Figure 9. Interactions – mean abundance, breeding and number of breeding
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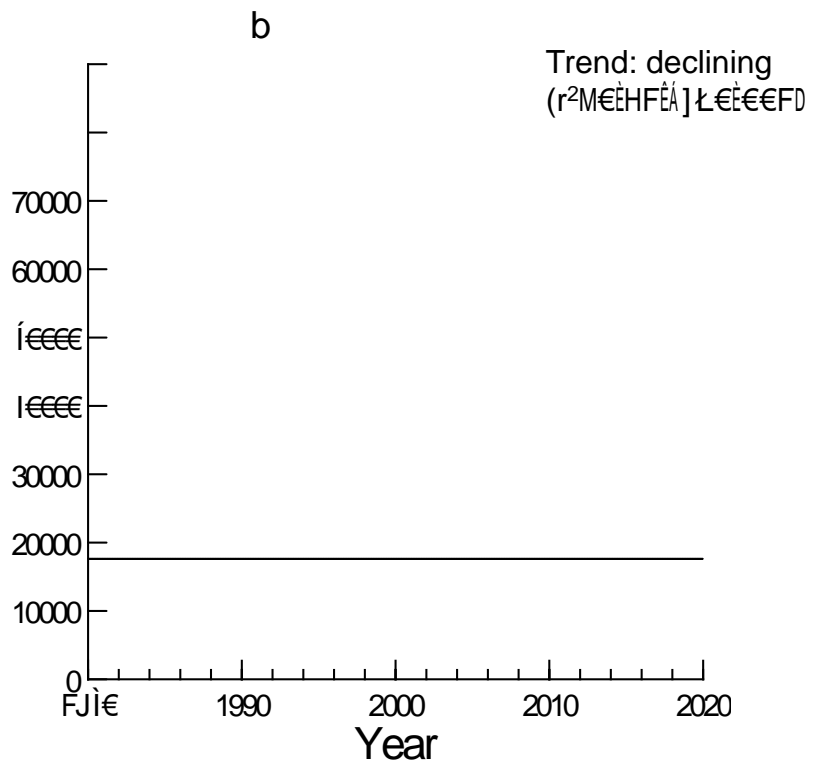
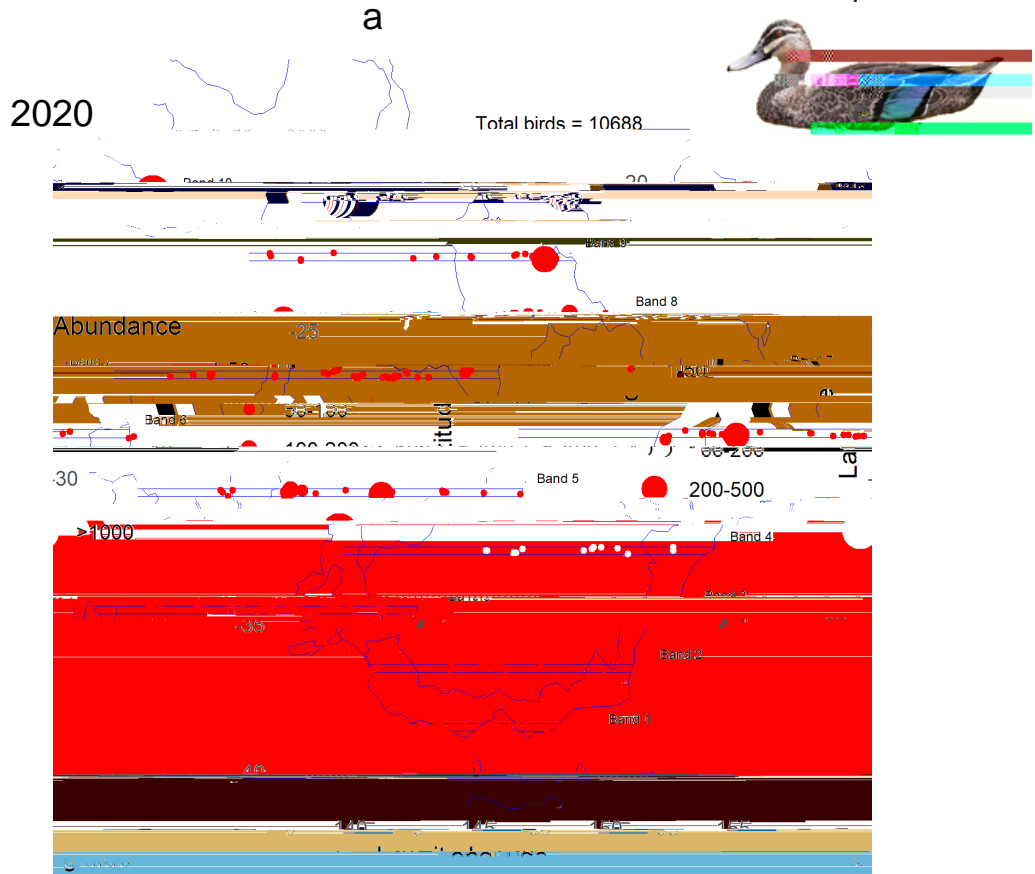


Figure 10 Eastern Australian Waterbird Survey. a. Abundance of birds in the 2020 Eastern Australian Waterbird Survey. b. Changes in abundance of birds in the Eastern Australian Waterbird Survey from 1970 to 2020.

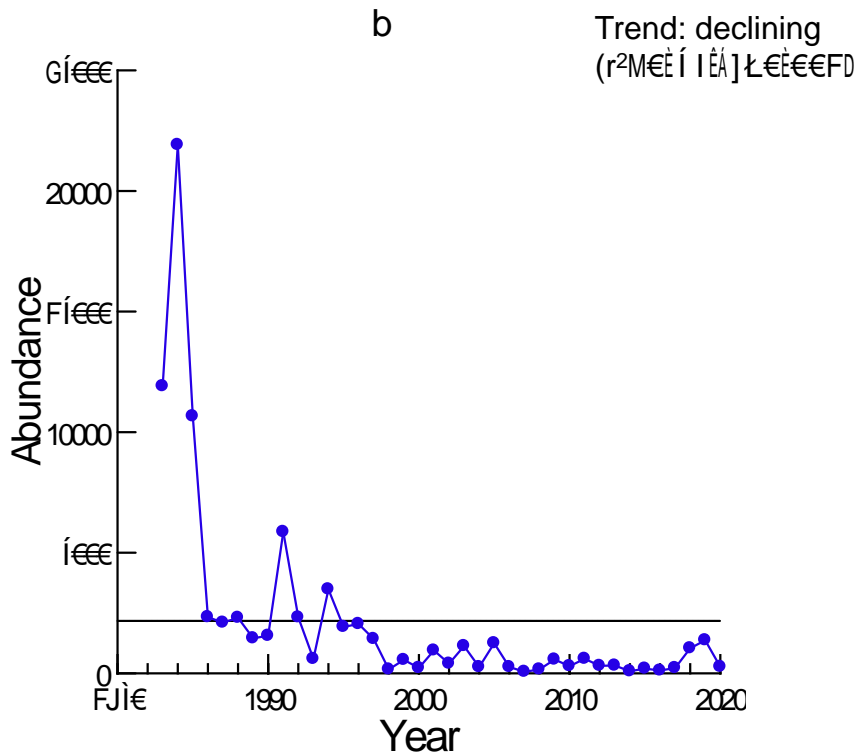
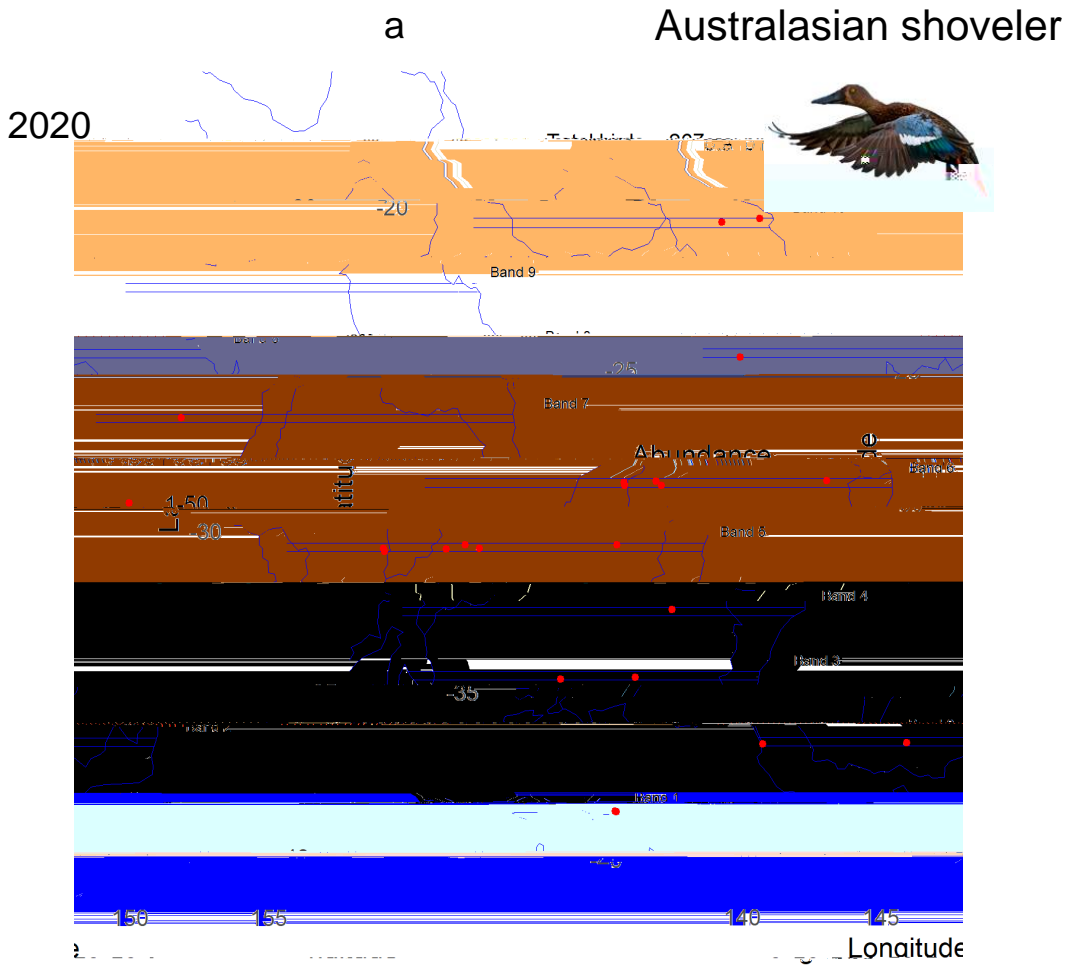


Figure 11. a. Distribution and abundance of Australasian shoveler during the 2020 Eastern Australian Waterbird Survey. b. Changes in abundance

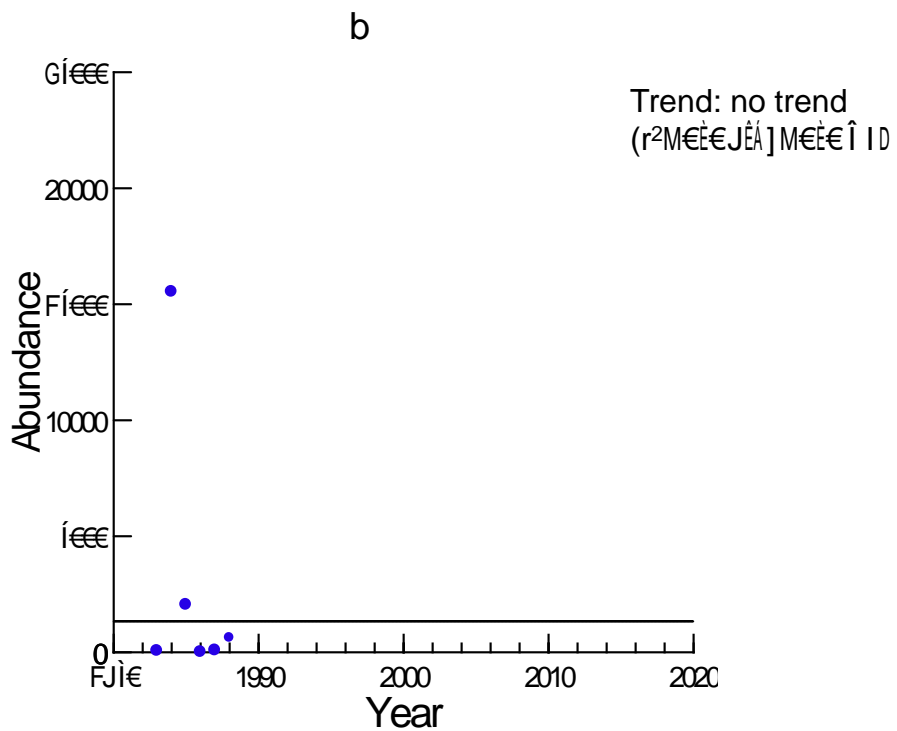
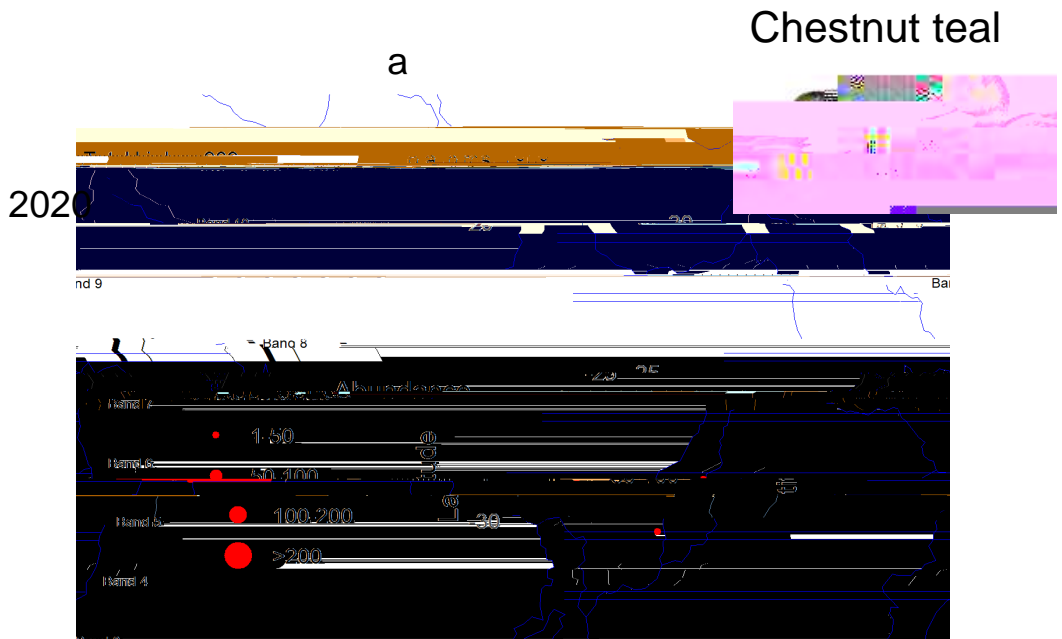


Figure 12. a. Distribution and abundance of Chestnut teal during the 2020 Eastern Australian Waterbird Survey. b. Changes in abundance of Chestnut teal from 1970 to 2020.

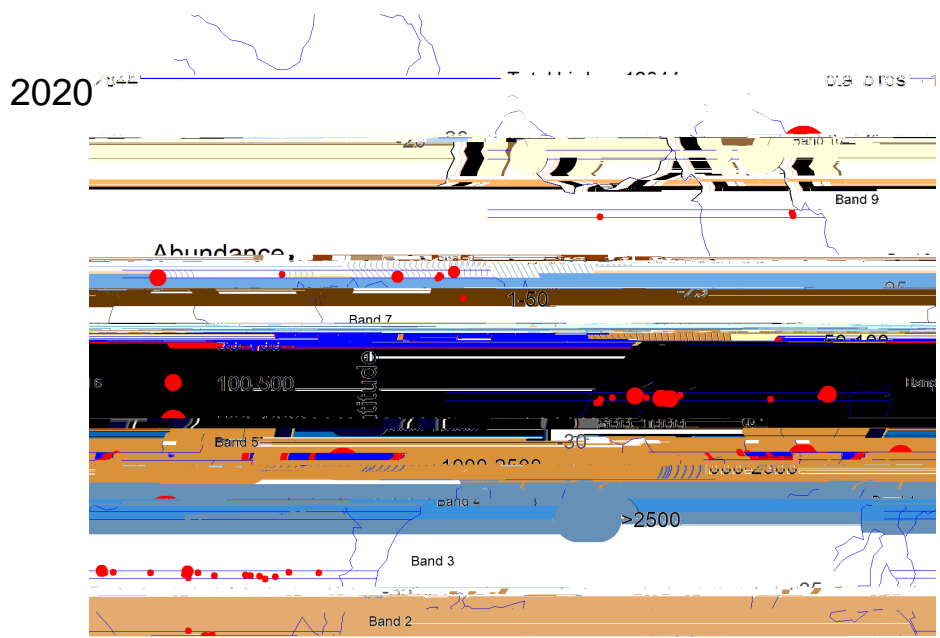
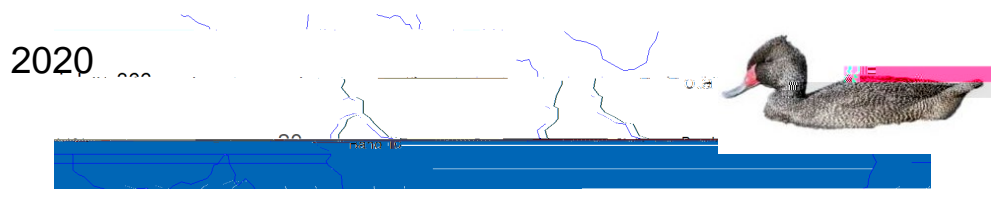


Figure 14. a. Distribution and abundance of Hardhead during the 2020



Trend: declining
 $(r^2 = 0.94)$

Figure 15

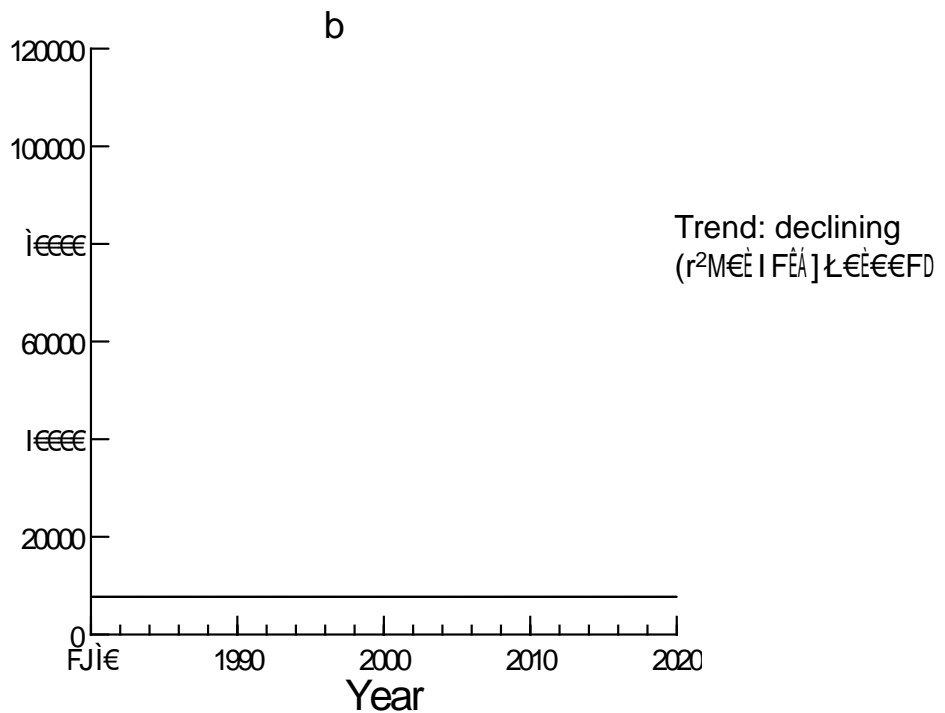
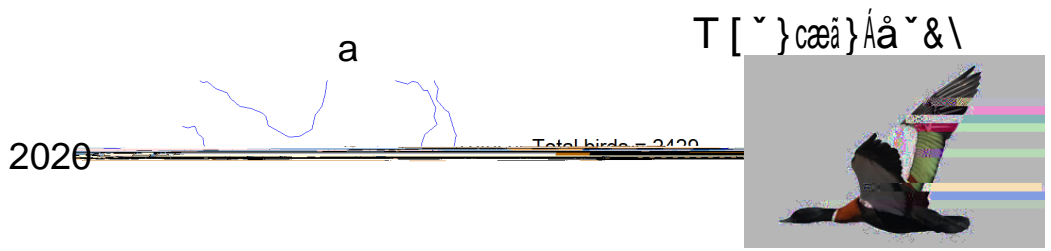


Figure 16 Eastern Australian Waterbird Survey. a. Map of the survey area showing bird counts in 2020. Total birds = 2420. b. Changes in abundance from 1990 to 2020. Trend: declining ($r^2 = 0.92$).

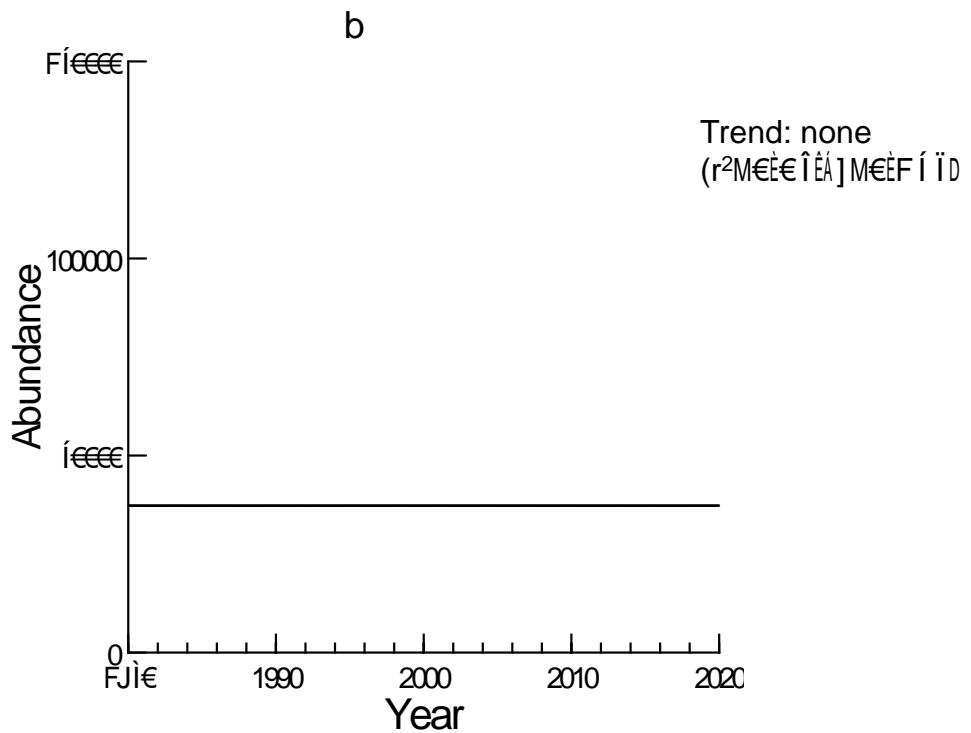
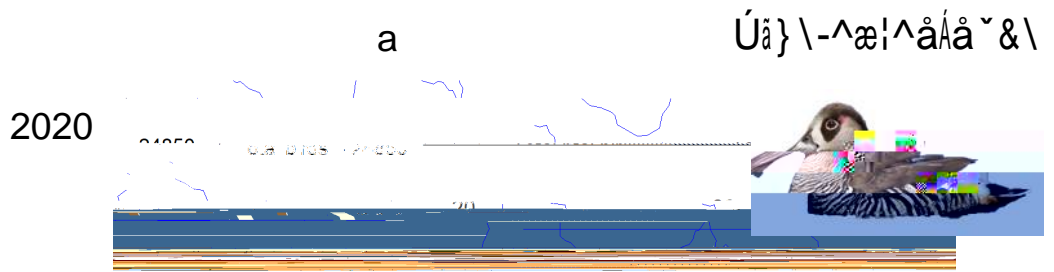
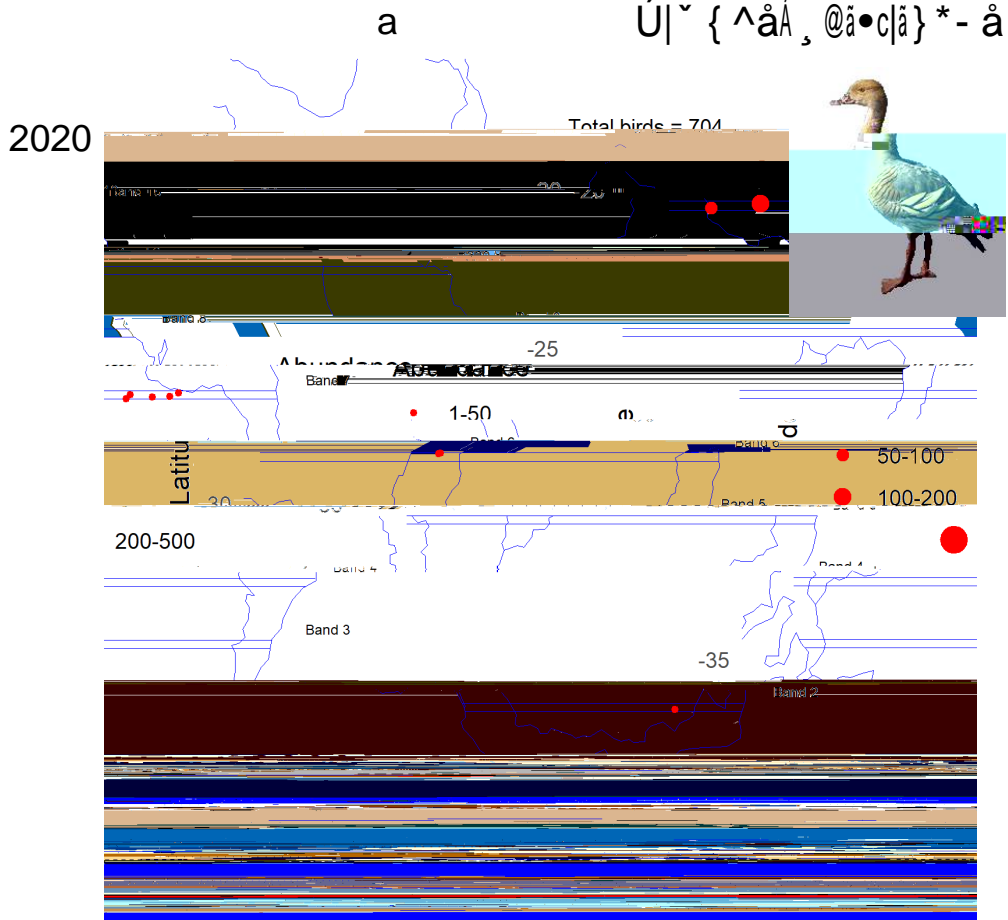


Figure 17 2020 Eastern Australian Waterbird Survey. a. Aerial view of the survey area. b. Changes in abundance of waterbirds from 1970 to 2020. The trend is none ($r^2 = 0.00$).

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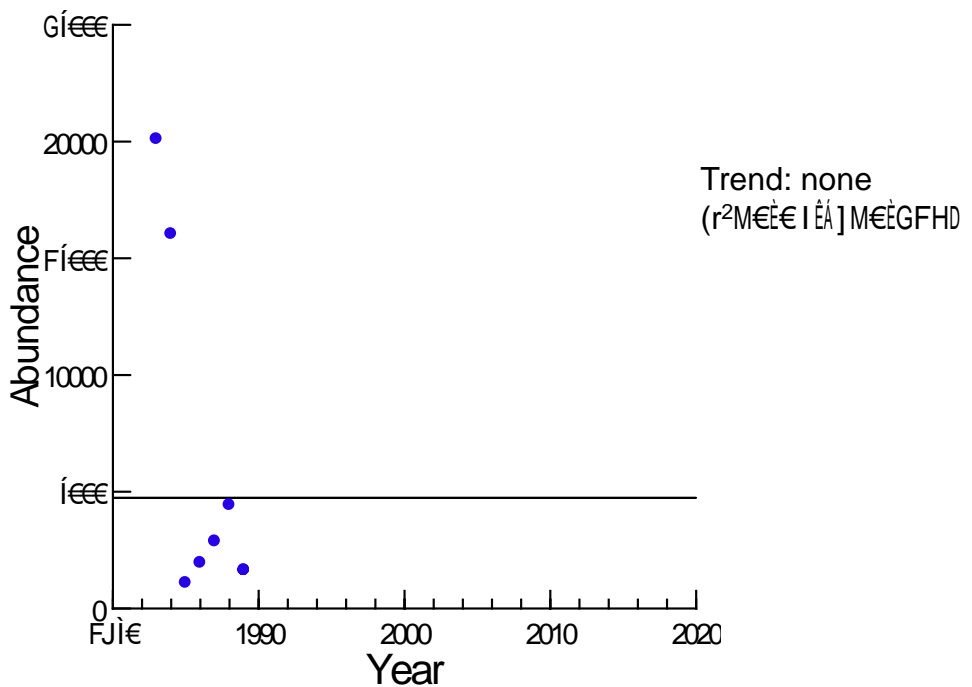
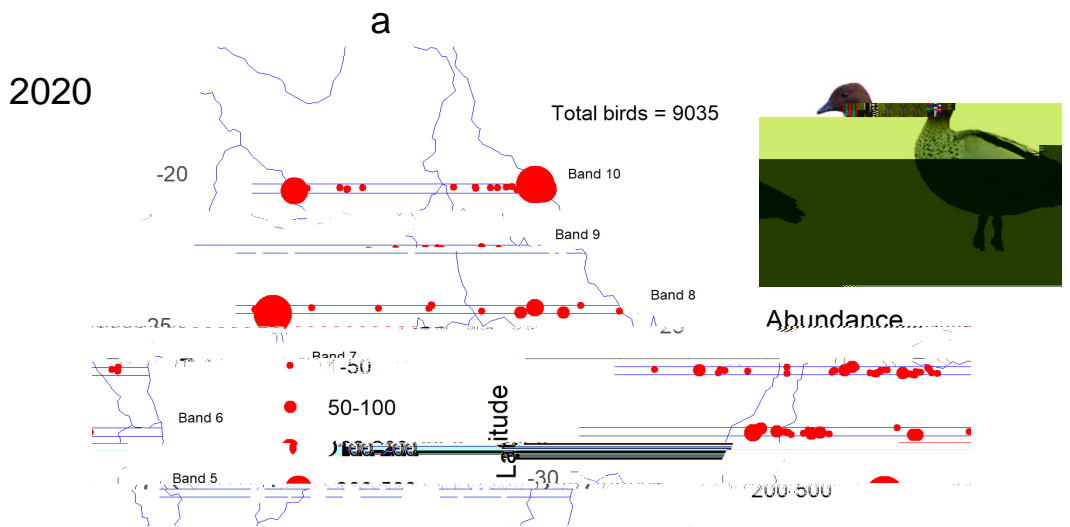


Figure 18 The 2020 Eastern Australian Waterbird Survey. b. Changes in abundance



b

Trend: declining
 $(r^2 = 0.66)$

Figure 19 the 2020 Eastern Australian Waterbird Survey. a. Changes in abundance of waterbirds across the survey area in 2020. b. Changes in abundance of waterbirds across the survey area in 2020. Trend: declining ($r^2 = 0.66$)

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