

**Population genomics reveals the genetic diversity and  
evolution of the sexual dimorphism of Temminck's tragopan  
(*Tragopan temminckii*)**

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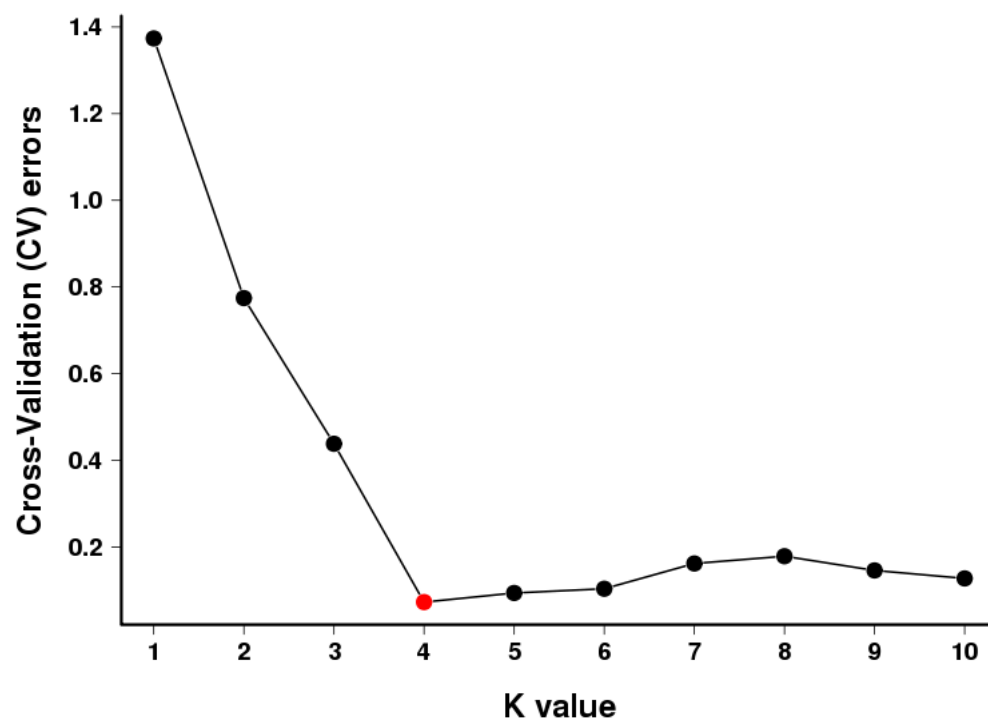
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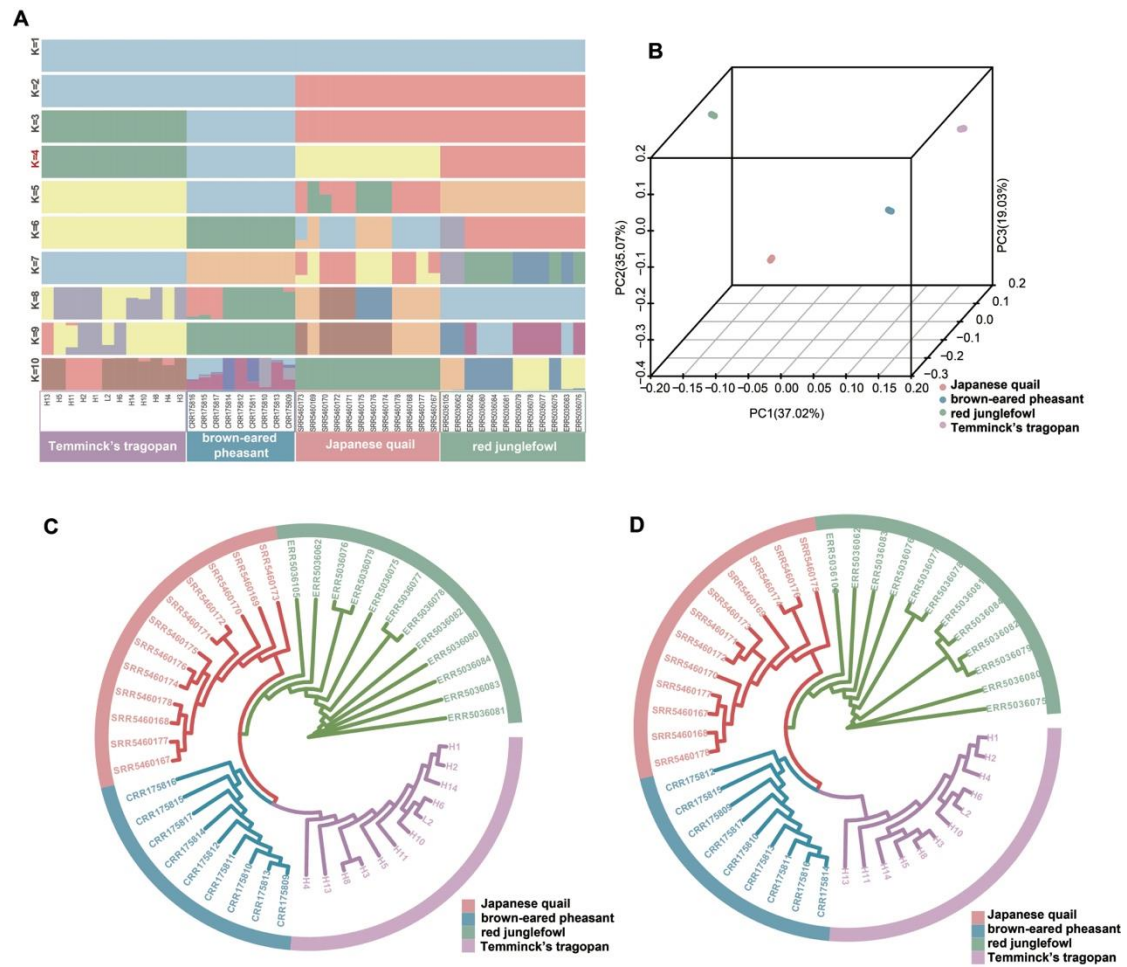
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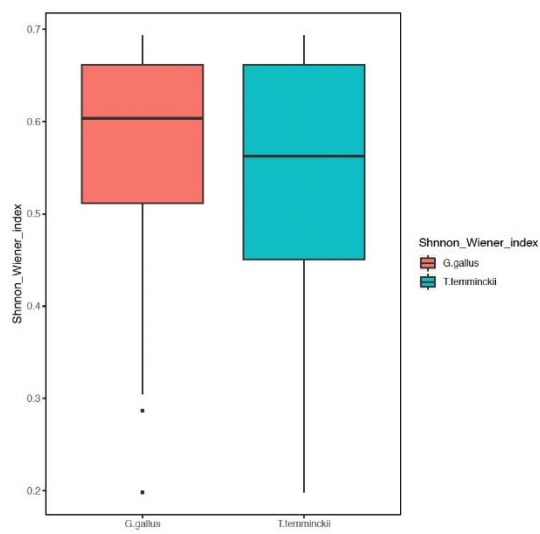
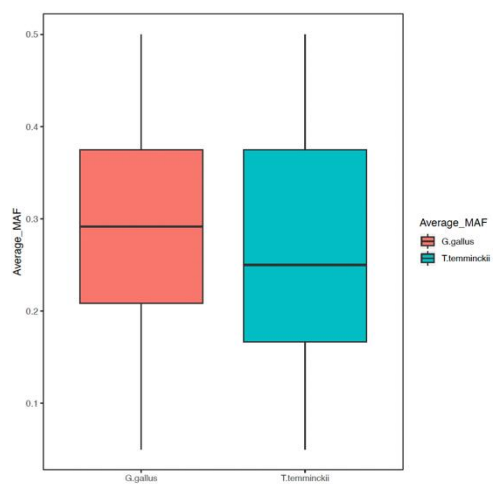
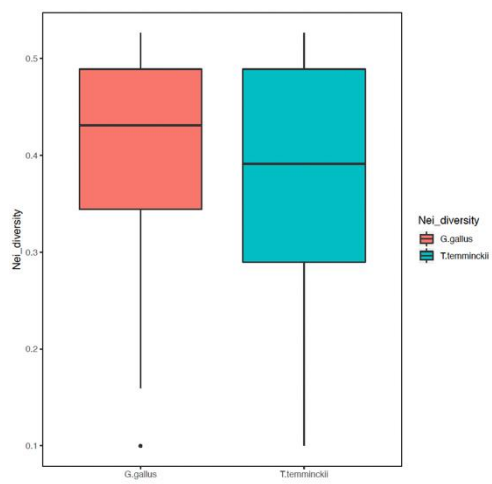
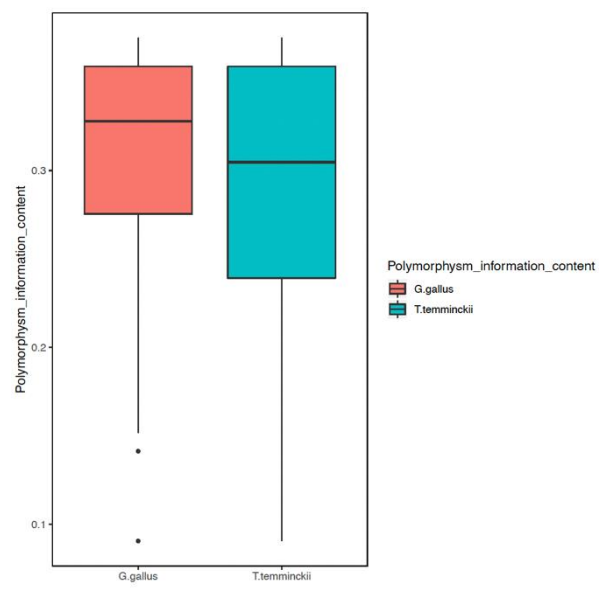
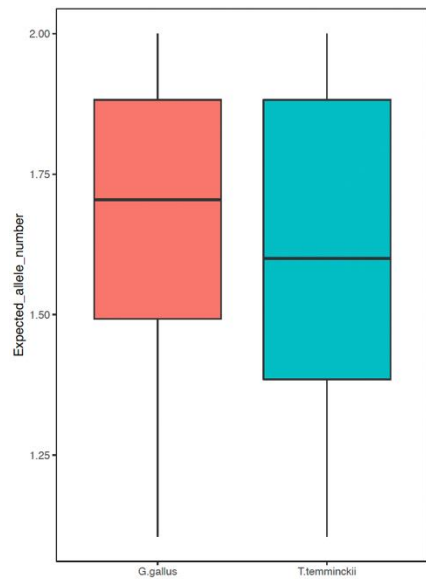
**Supplementary material**



**Figure S1.** The optimal population delineation occurring at  $K = 4$ .

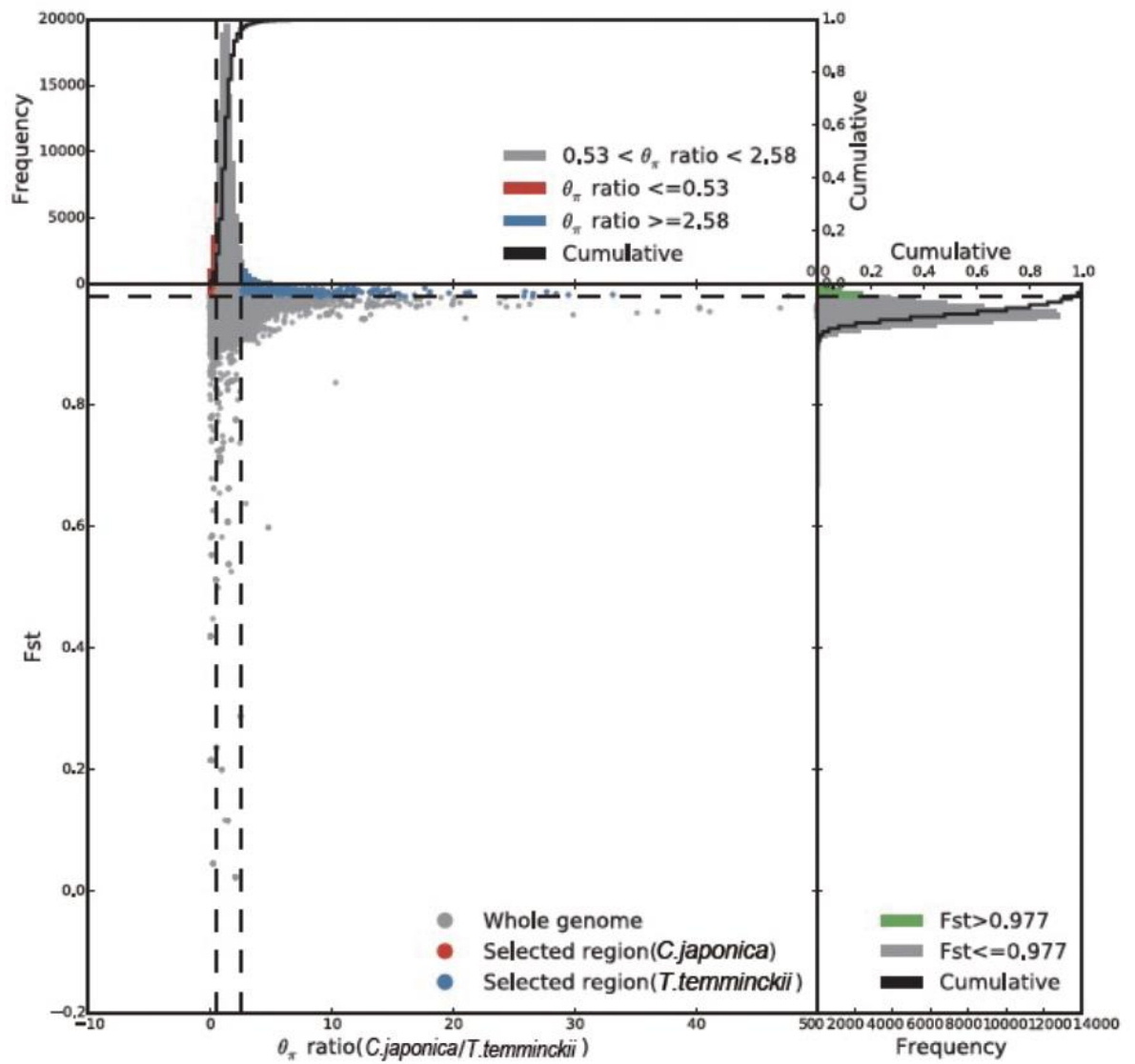


**Figure S2.** Analysis of genetic structure and phylogeny of four Phasianidae species. (A) The STRUCTURE analysis results, K value was set from 1 to 10, (B) PCA analysis results, (C) Phylogenetic tree constructed using MEGA X for four Phasianidae species, and (D) Phylogenetic tree constructed using RAxML for four Phasianidae species.

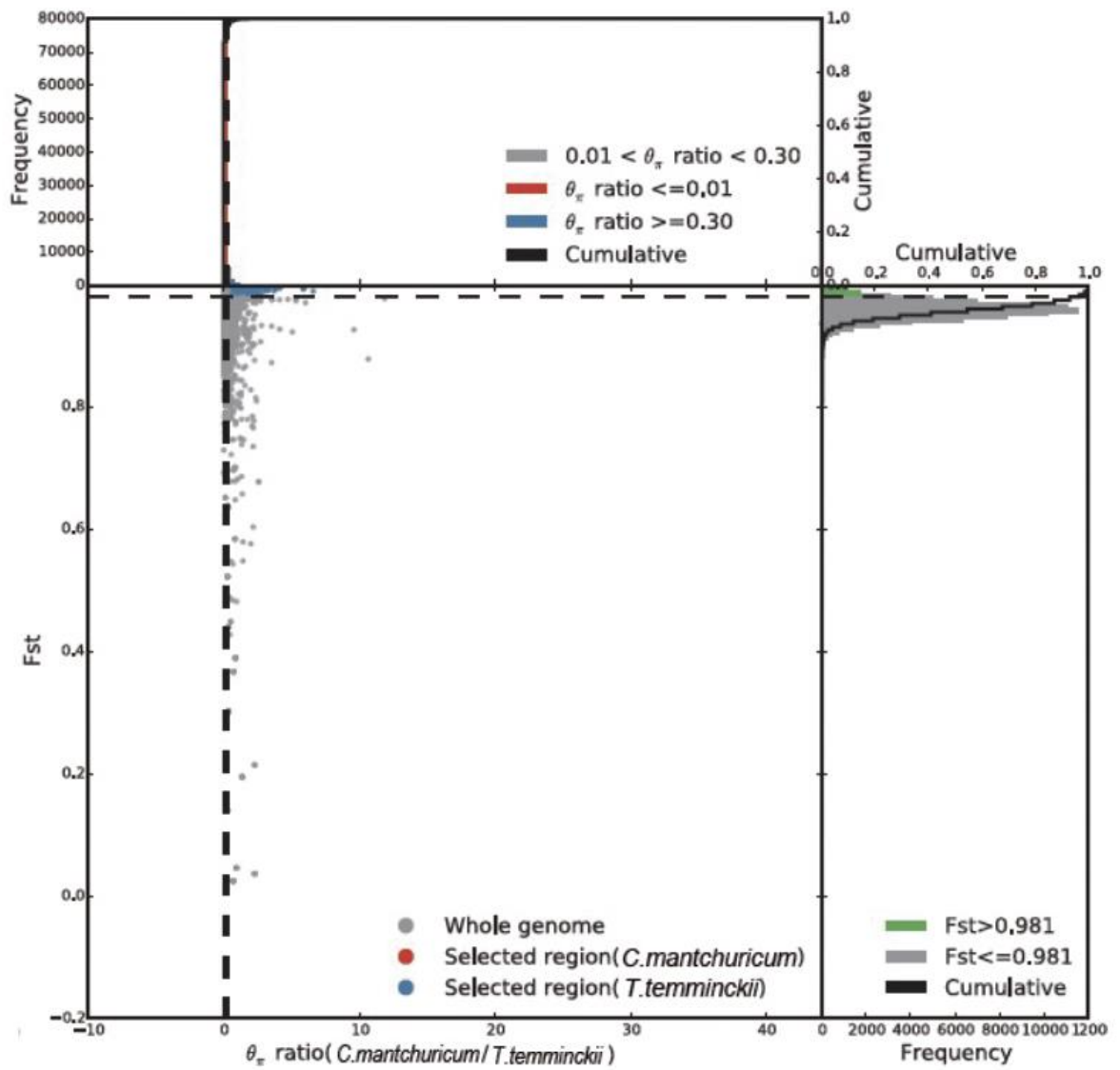


**Figure S3.** Genetic diversity results. *T. temminckii* and *G. Gallus* represent Temminck's tragopan and red junglefowl, respectively.

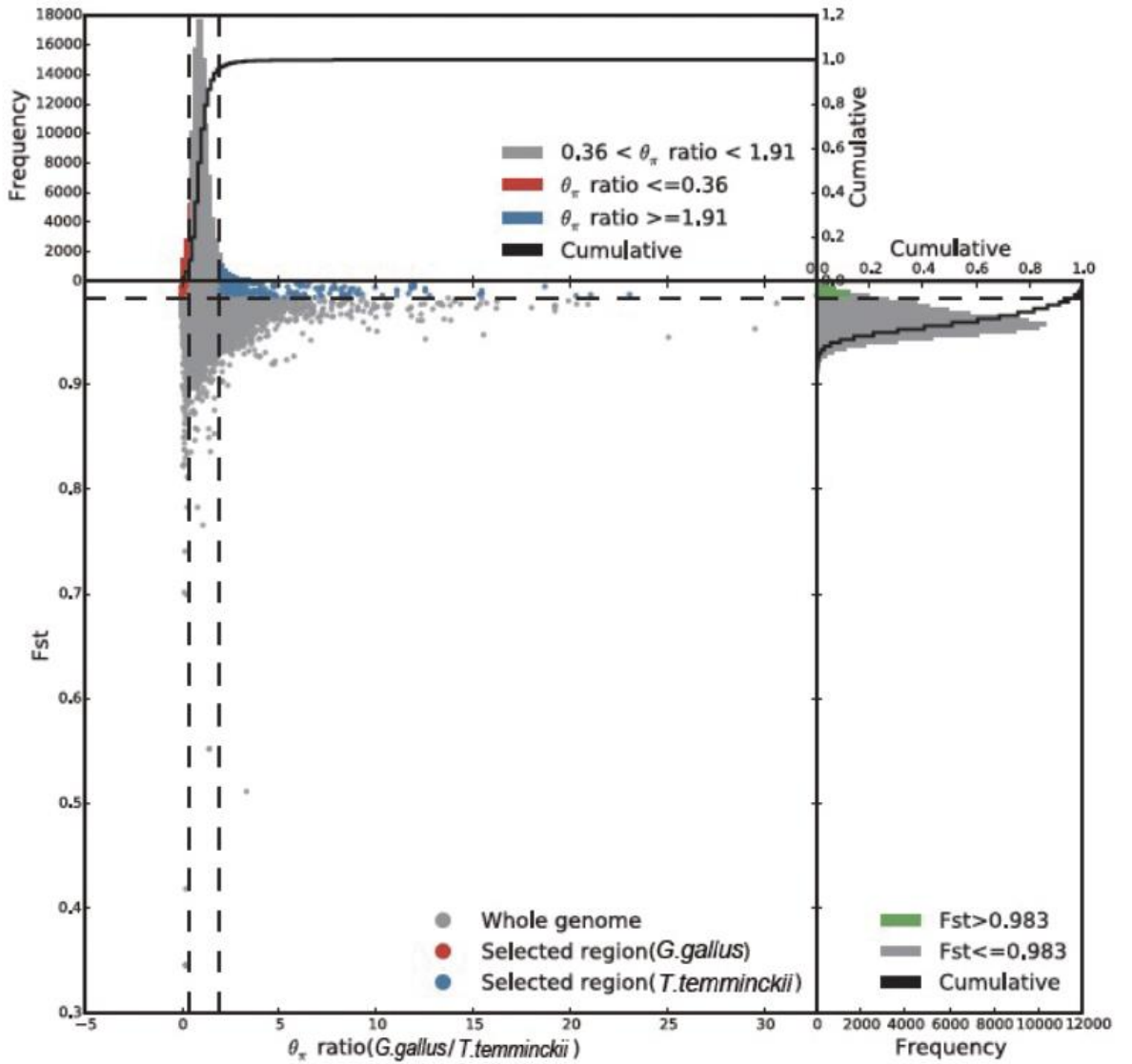
A



B

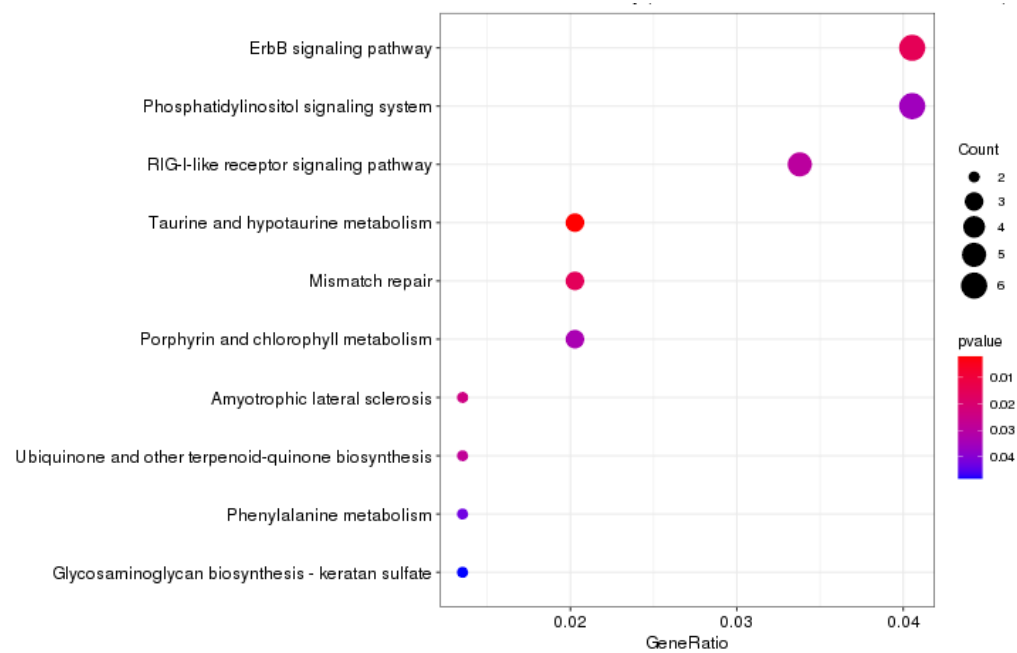


C

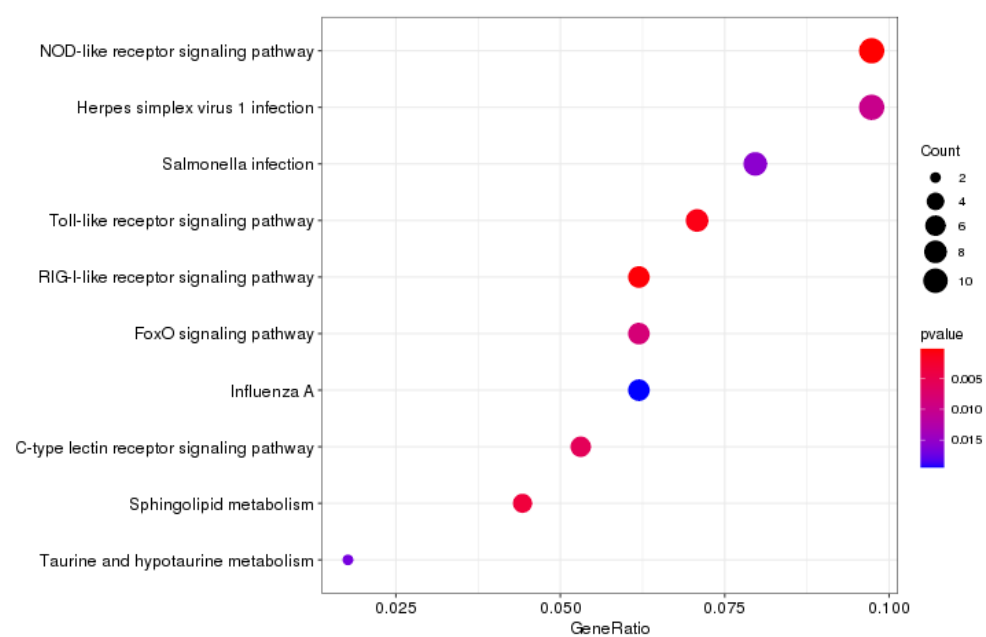


**Figure S4.** Genomic regions with strong selective sweep signals in Temminck's tragopan. (A) Japanese quail vs Temminck's tragopan, (B) brown-eared pheasant vs Temminck's tragopan, (C) red junglefowl vs Temminck's tragopan. *T. temminckii*, *C. japonica*, *G. Gallus* and *C. mantchuricum* represent Temminck's tragopan, Japanese quail, red junglefowl, and brown-eared pheasant, respectively.

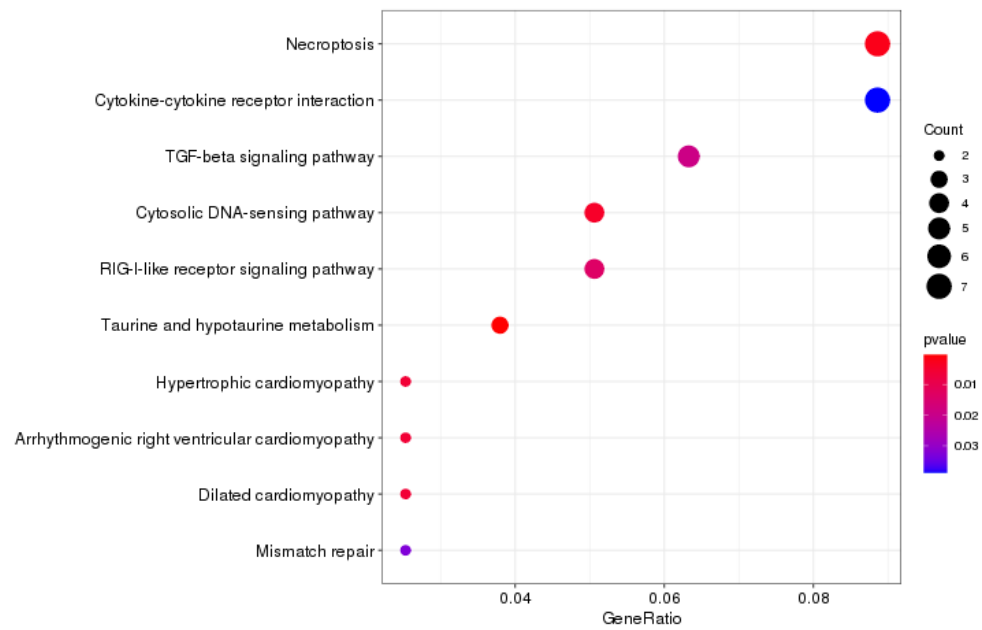




**Figure S5.** Top ten KEGG pathway of candidate genes in Temminck's tragopan (Japanese quail vs Temminck's tragopan).

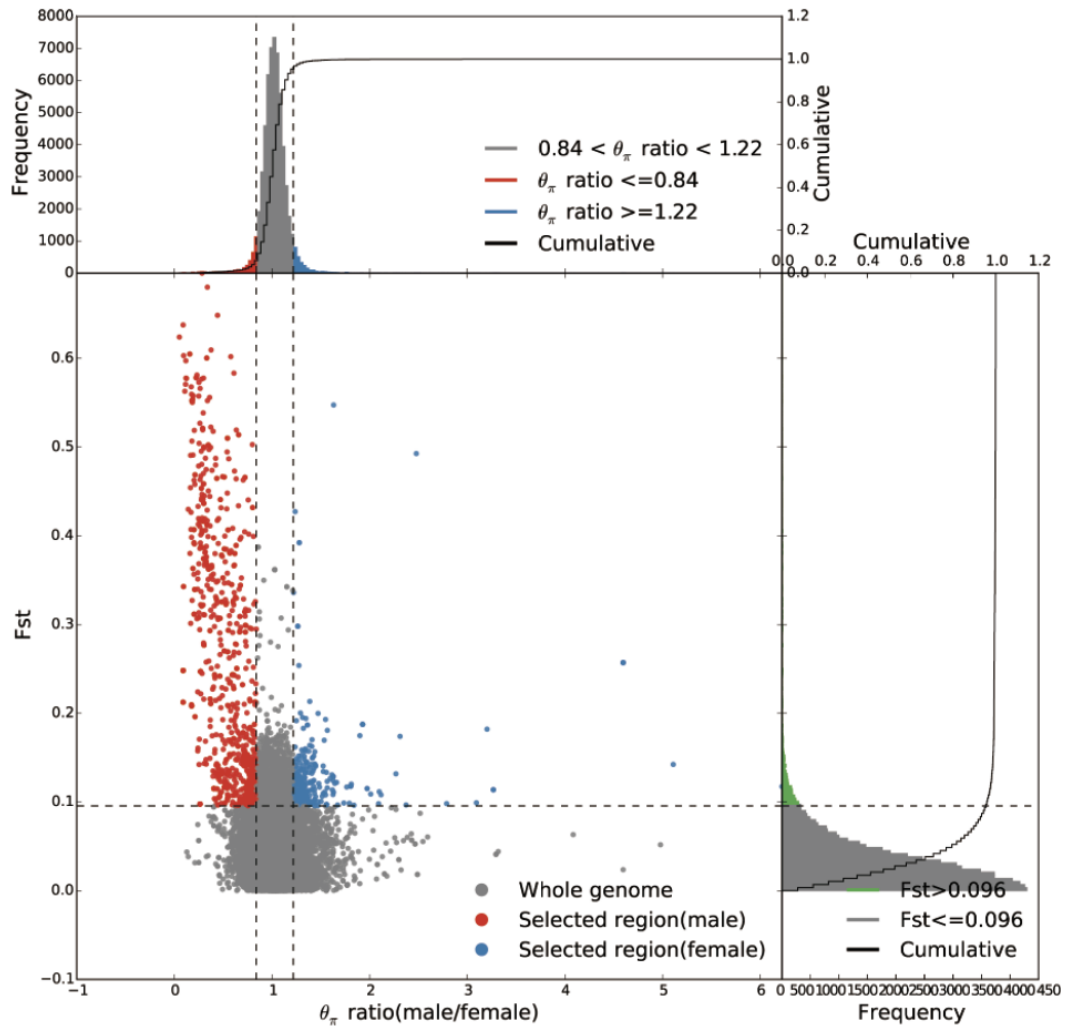


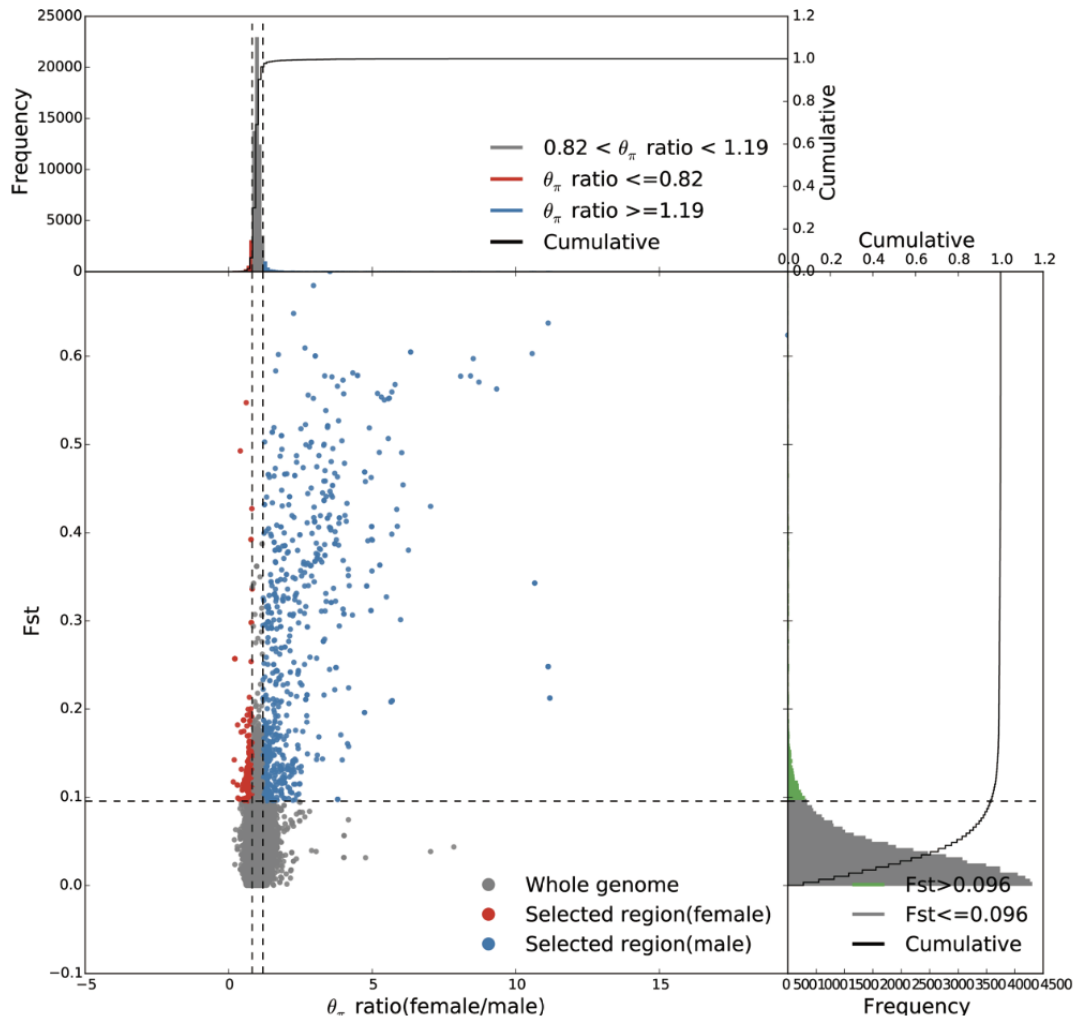
**Figure S6.** Top ten KEGG pathway of candidate genes in Temminck's tragopan (brown-eared pheasant vs Temminck's tragopan).



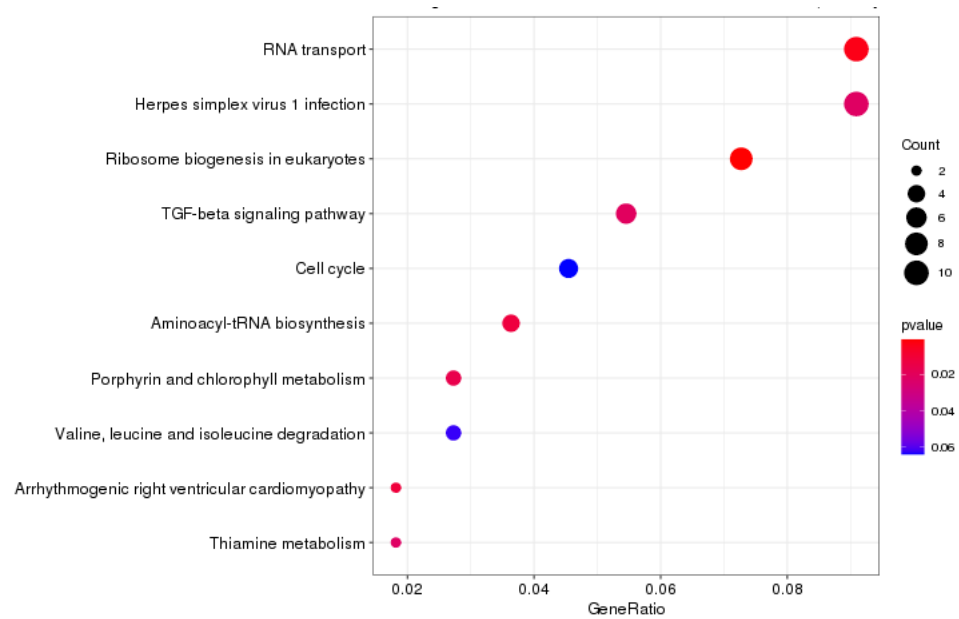
**Figure S7.** Top ten KEGG pathway of candidate genes in Temminck's tragopan (red junglefowl vs Temminck's tragopan).

**A**

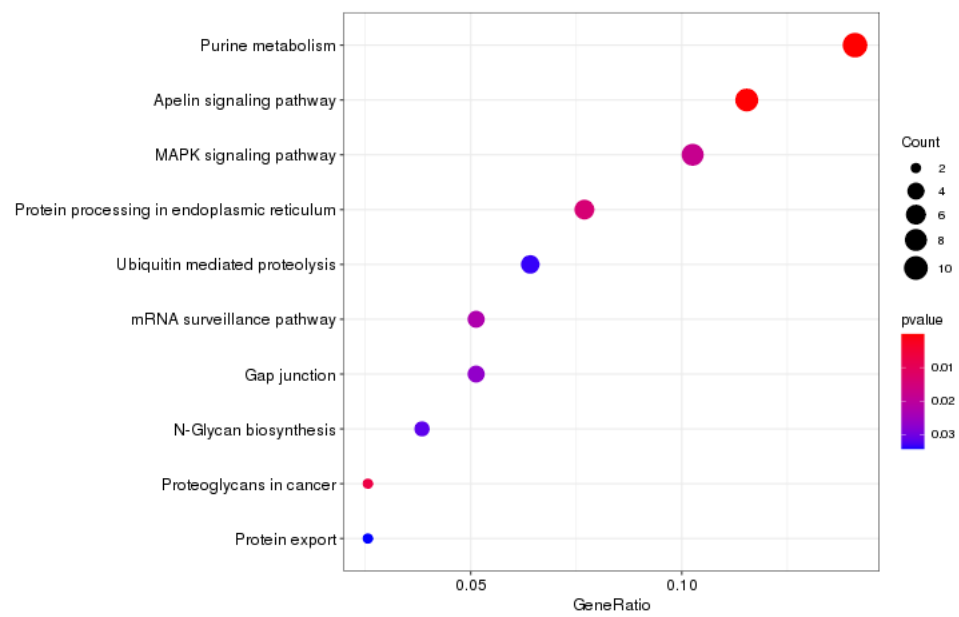


**B**

**Figure S8.** Identification of genomic regions with strong selective sweep signals in Temminck's tragopan males and females. (A) male vs female, (B) female vs male.



**Figure S9.** Top ten KEGG pathway of candidate genes in male Temminck's tragopan.



**Figure S10.** Top ten KEGG pathway of candidate genes in female Temminck's tragopan.