Figure S1: Mean nucleotide heterozygosity (pi) in 100kb windows for Maine and Panama by chromosome. A: *2*L. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Figure S2: log2FC for Maine *vs*. Panama in the accessory gland by chromosome in 51-gene windows. A: *2L*. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Figure S3: log2FC for Zambia *vs*. Maine in the accessory gland by chromosome in 51-gene windows. A: *2L*. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Figure S4: log2FC for Zambia *vs*. Panama in the accessory gland by chromosome in 51-gene windows. A: *2L*. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Figure S5: log2FC for Maine *vs*. Panama in the testis by chromosome in 51-gene windows. A: *2L*. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Figure S6: log2FC for Zambia *vs*. Maine in the testis by chromosome in 51-gene windows. A: *2L*. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Figure S7: log2FC for Zambia *vs*. Panama in the testis by chromosome in 51-gene windows. A: *2L*. B: *2R*: C: *3L*. D: *3R*. E: *X*. F: *4*.

Table S1: Libraries

Table S2: Genes Expressed at a Mean TPM ≥ 1

Table S3: Accessory Gland Expressed Genes

Table S4: Testis Expressed Genes

Table S5: Genes expressed at TPM ≥ 1 in studied populations, but not in FlyAtlas2

Table S6: DE genes by Category

Table S7: GO analyses - Accessory Gland

Table S8: Chromosomal Distribution of DE Genes

Table S9: DE Genes in Common Cosmopolitan Inversions

Table S10: Accessory Gland expressed Transcription Factors

Table S11: SNPs ≥ 90% *FST* in Maine *vs.* Africa and Panama *vs.* Africa

Table S12: GO analyses - Testis

Table S13: Testis Out-of-Africa DE in Spermatogenesis Cell Types.

Table S14: Shared Out-Of-Africa Genes

Table S15: Interspecific DE in the Accessory Gland

Table S16: Interspecific DE in the Testis.

Table S17: Interspecific DE by chromosome.

Table S18: GO analyses; African *D. melanogaster* versus *D. simulan*s.

Table S19: Testis Interspecific DE in Spermatogenesis Cell Types.

Table S20: DE between Zambia *D. melanogaster* and *D. simulans*