

## Genes Found in new Genomes

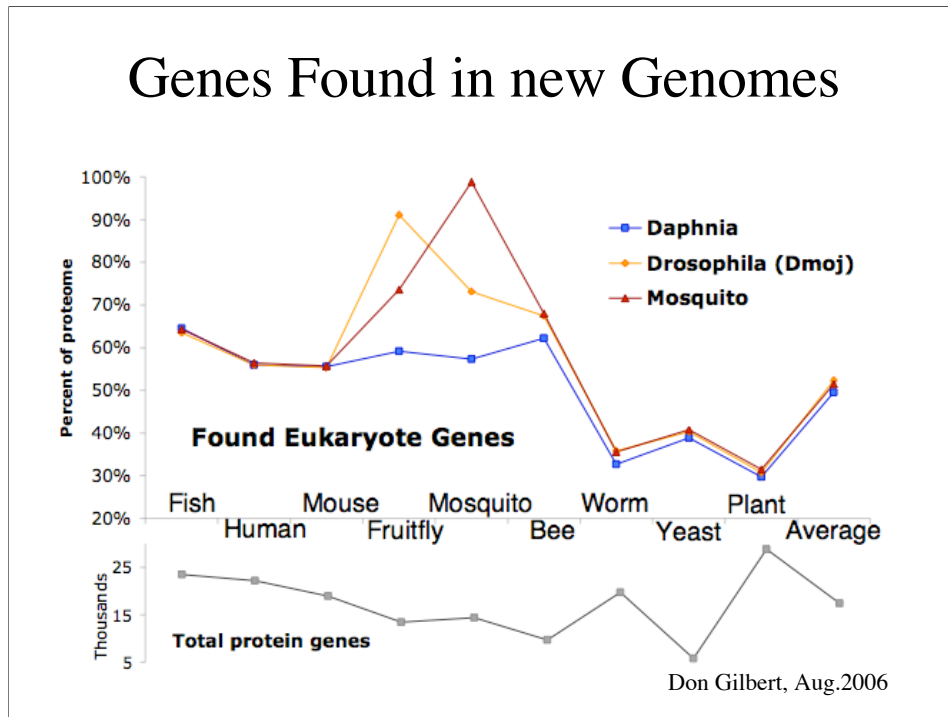


Figure 2. Percent of full gene sets of nine reference eukaryote genomes found in new genomes *Daphnia pulex*, *Drosophila mojavensis*, and reference genome *Anopheles gambiae*, from DroSpeGe and wFleaBase genome analyses. The lower section shows total number of protein genes for each reference genome, with the upper section the percent of these found in new genomes. New genome *D. mojavensis* has 90% similarity to the reference fruitfly *D. melanogaster*, and *A. gambiae* has 100% similarity to itself. These are taken from tBLASTn analyses with a match significance of  $1e-10$  or stronger.

## Genes Found Table

Species	Fish	Human	Mouse	Dmel	Mosquito	Bee	Worm	Yeast	Weed	Total
Dros.gri	14819	12357	10440	12188	10328	6466	7018	2320	8797	84733
Dros.moj	14930	12434	10481	12276	10503	6519	7071	2330	8874	85418
Daphnia 0609	15172	12429	10522	7965	8236	6018	6453	2244	8577	77616
Mosquito	15123	12534	10551	9920	14193	6571	7032	2355	9092	87371
Total genes	23524	22216	18941	13472	14364	9671	19765	5777	28860	156590

Species	Fish	Human	Mouse	Dmel	Mosquito	Bee	Worm	Yeast	Weed	Average
Drosophila	63.47%	55.97%	55.33%	91.12%	73.12%	67.41%	35.78%	40.33%	30.75%	47.13%
Daphnia	64.50%	55.95%	55.55%	59.12%	57.34%	62.23%	32.65%	38.84%	29.72%	46.52%
Mosquito	64.29%	56.42%	55.70%	73.63%	98.81%	67.95%	35.58%	40.77%	31.50%	47.60%
Average	64.08%	56.11%	55.53%	74.63%	76.42%	65.86%	34.67%	39.98%	30.66%	47.08%

### Percent found of Total Genes in Genomes

Daphnia averages slightly fewer % found, excluding insects, than Dros, Mosquito. This may well be an artifact due to assembly incompleteness. However Daphnia shows 50 - 100 more Fish genes than insects (compare mammal genes). This might be eco-genetic rather than taxonomic or assembly artifact. Details of which Fish genes are in Daphnia not in insects may validate this.