MEAN COMPLEXITY METRIC BOXPLOTS
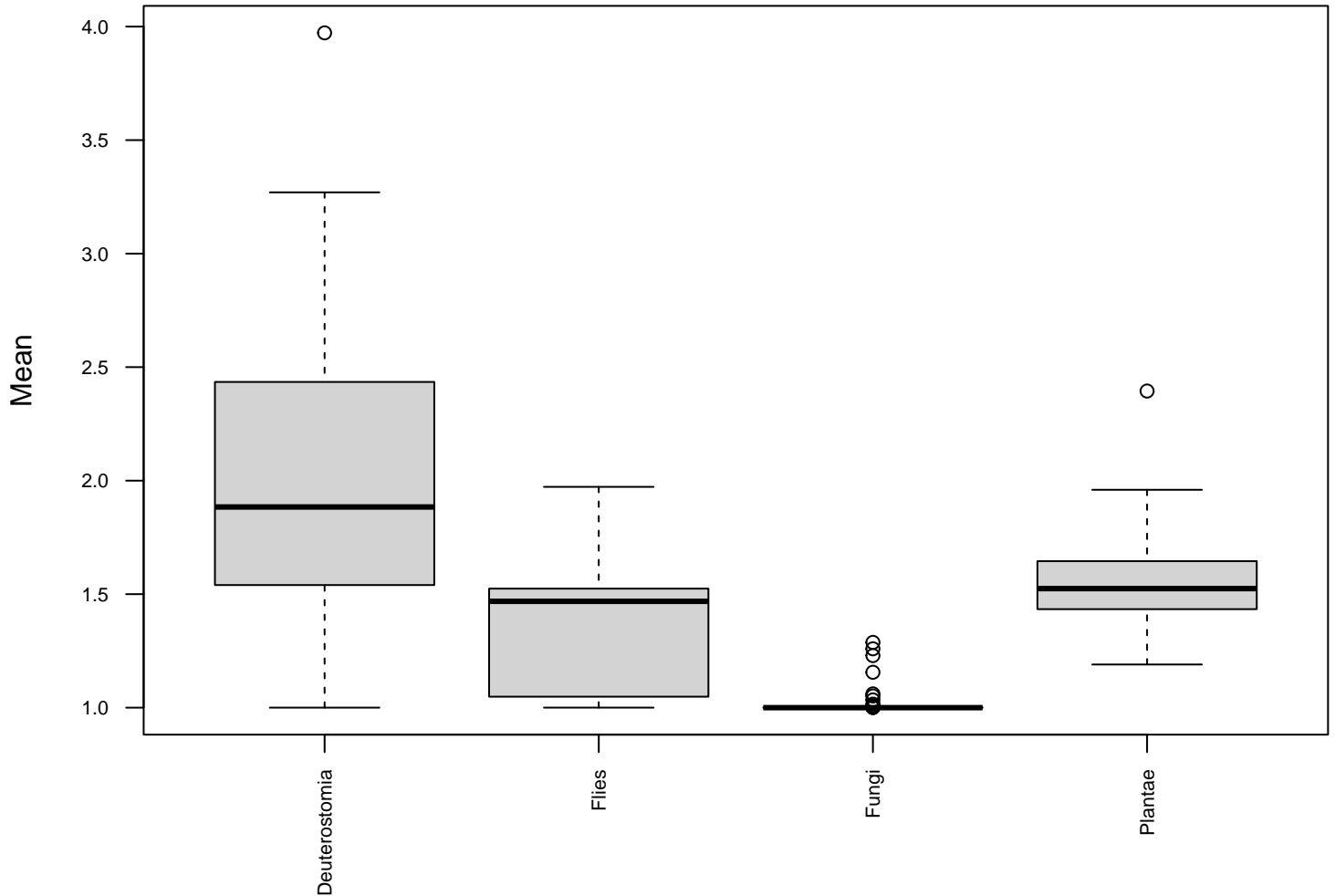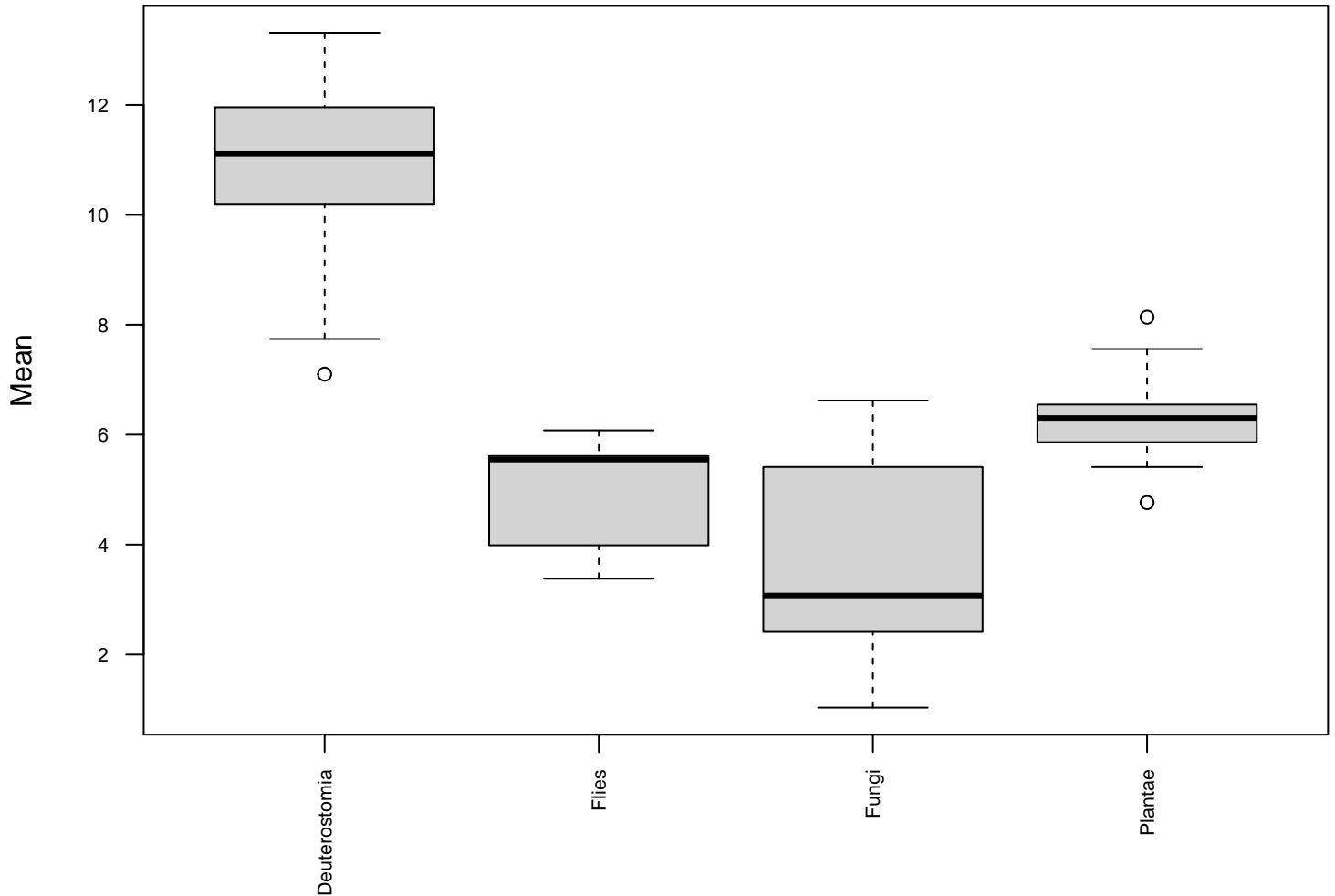
Figures below account for mean metric (TpG, EpT, and EpG) box and whisker plots among a variety of higher-order grouping among Deuterostomes, *Drosophila*, Plantae, and Fungi. Kruskal-Wallis tests were performed, and statistical values are recorded in the sub-header. Y-axes are the metric values, and x-axes have group labels.
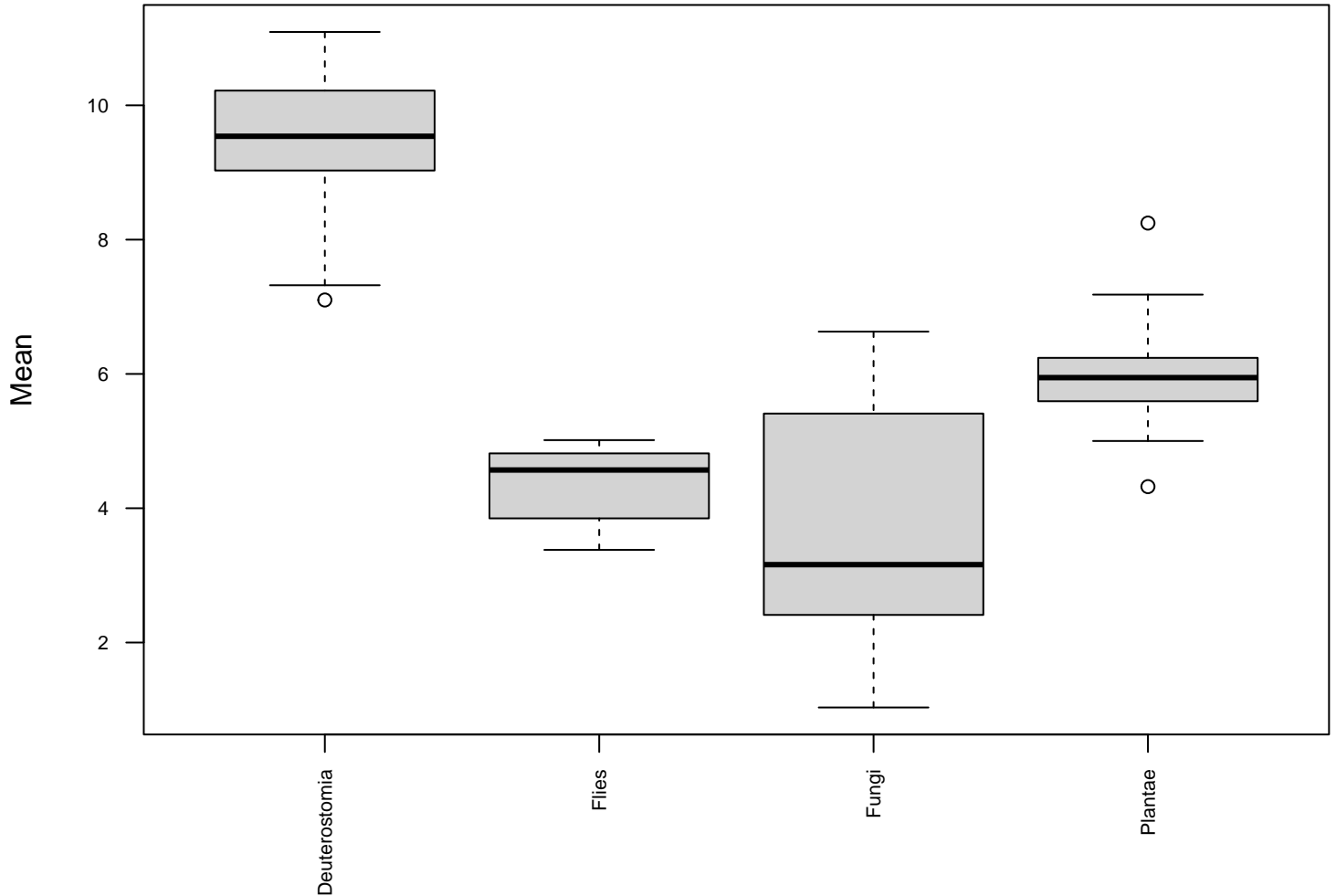
All Groups Mean TpG
Kruskal−Wallis rank sum test
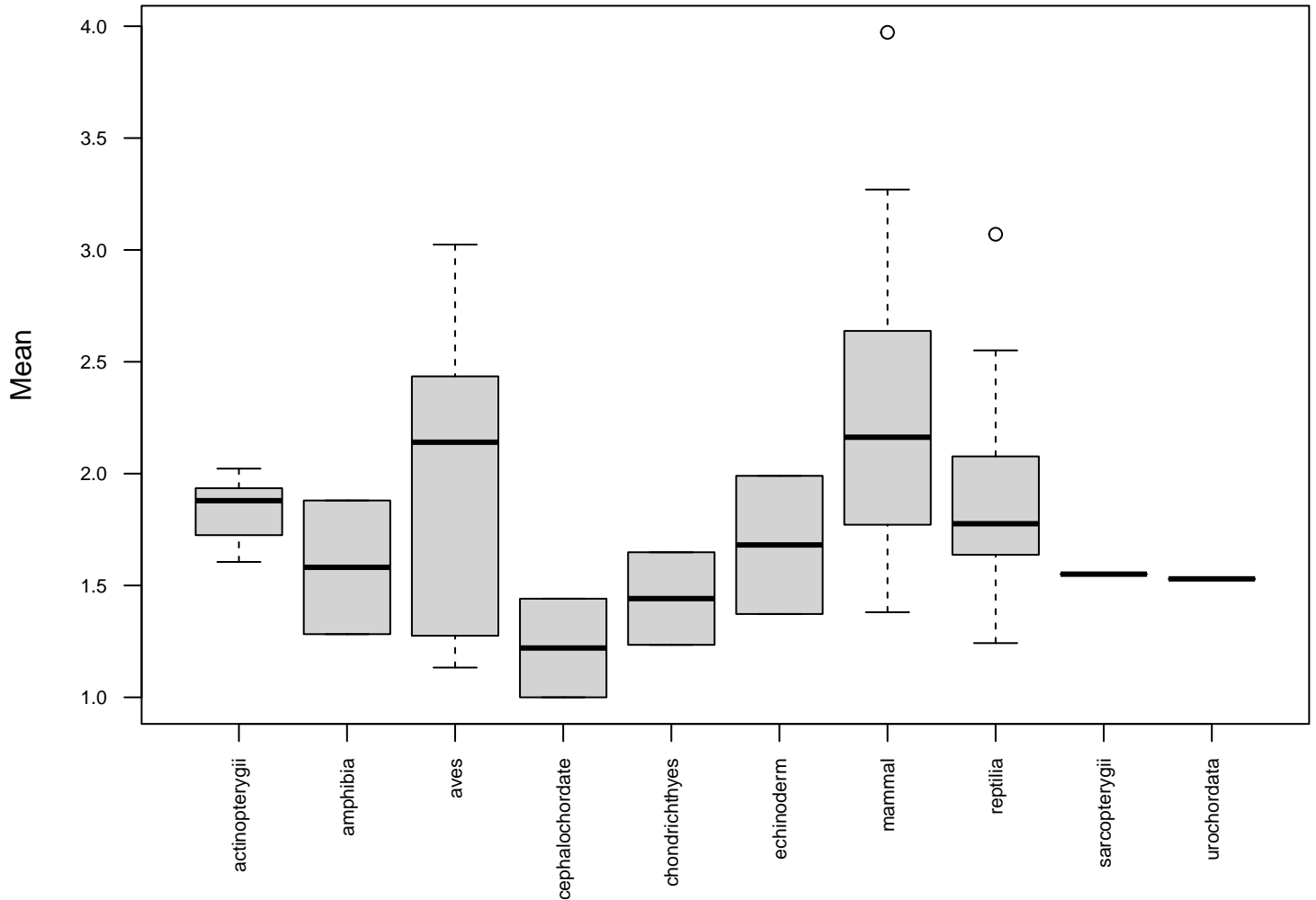**Chi−Sq = 148.4 p= 5.777e−32**

All Groups Mean EpT
Kruskal−Wallis rank sum test
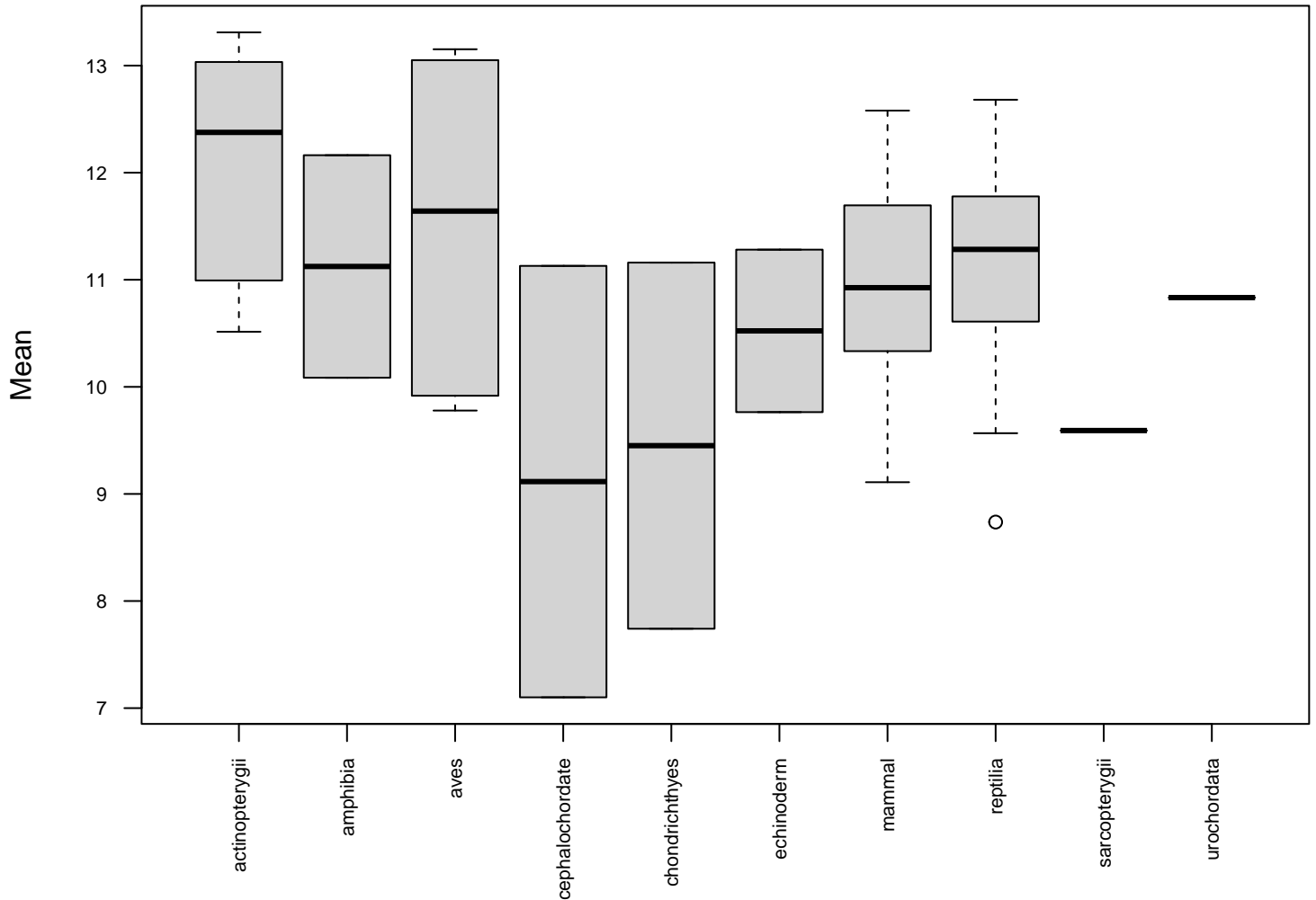Chi−Sq = 160.9 p= 1.19e−34

All Groups Mean EpG
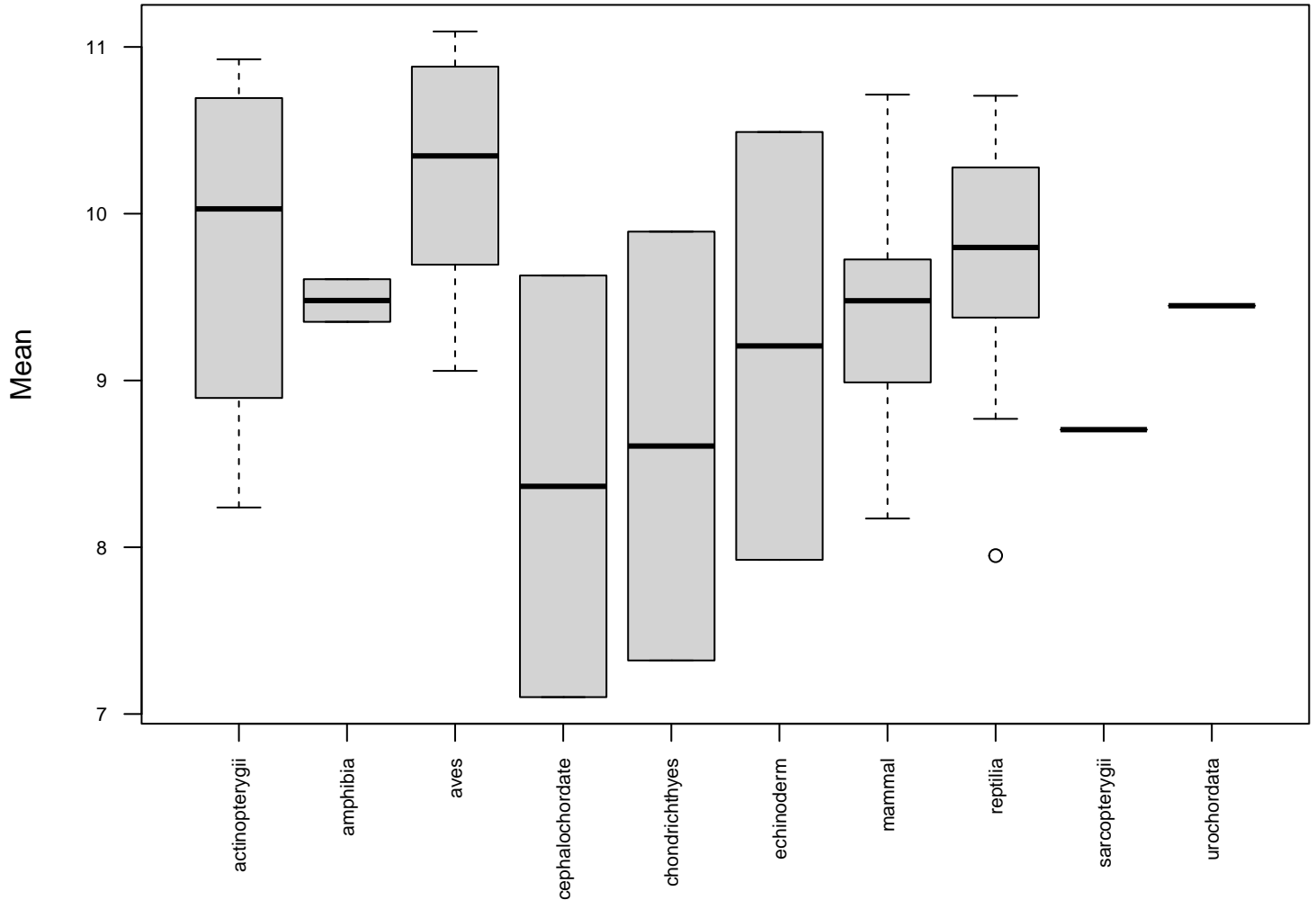**Kruskal−Wallis rank sum test**
Chi−Sq = 155.1 p= 2.084e−33

Deuterostome Class Mean TpG
Kruskal−Wallis rank sum test
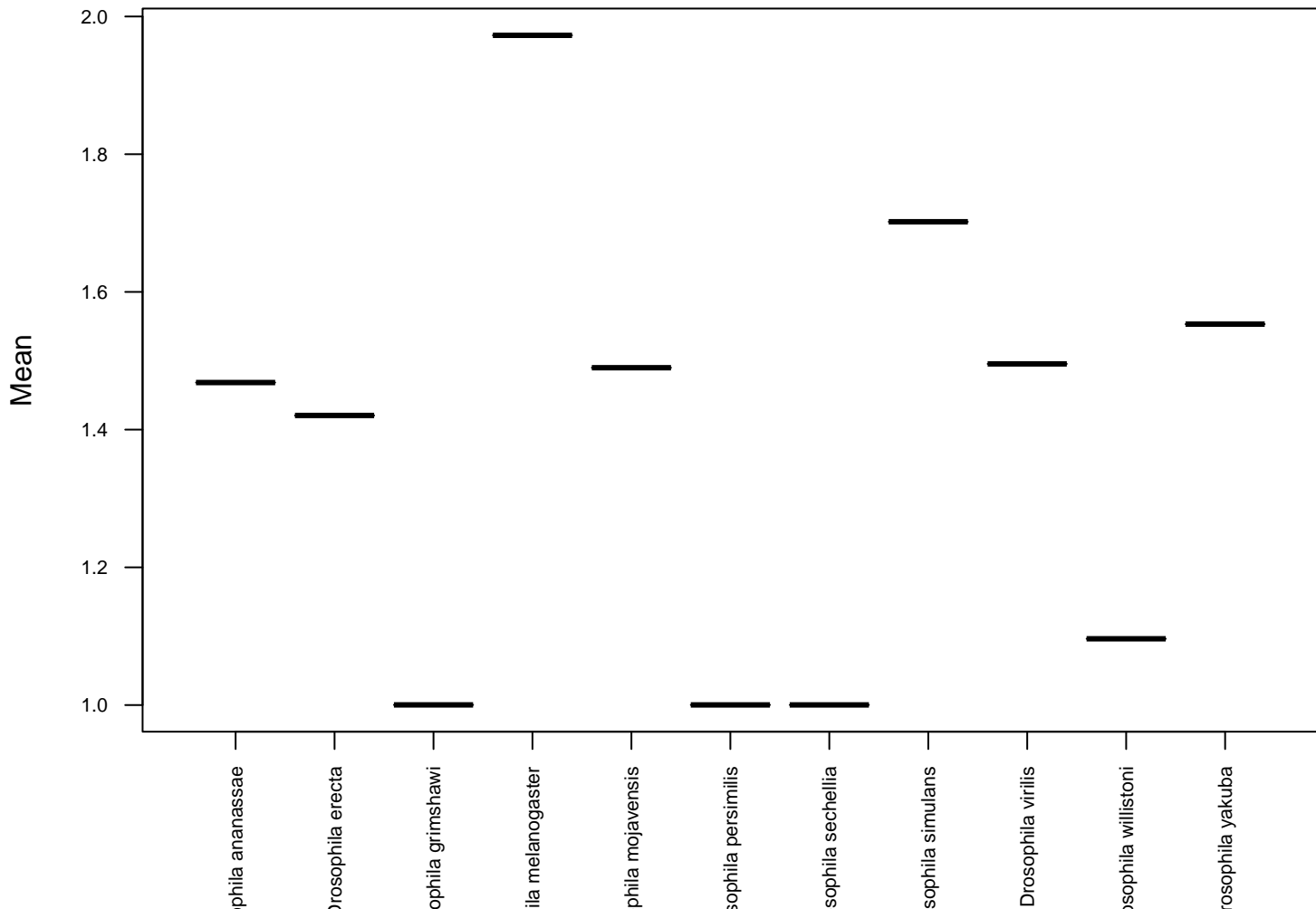**Chi−Sq = 15.35 p= 0.08188**

Deuterostome Class Mean EpT
Kruskal−Wallis rank sum test
Chi−Sq = 9.497 p= 0.3927

Deuterostome Class Mean EpG
Kruskal−Wallis rank sum test
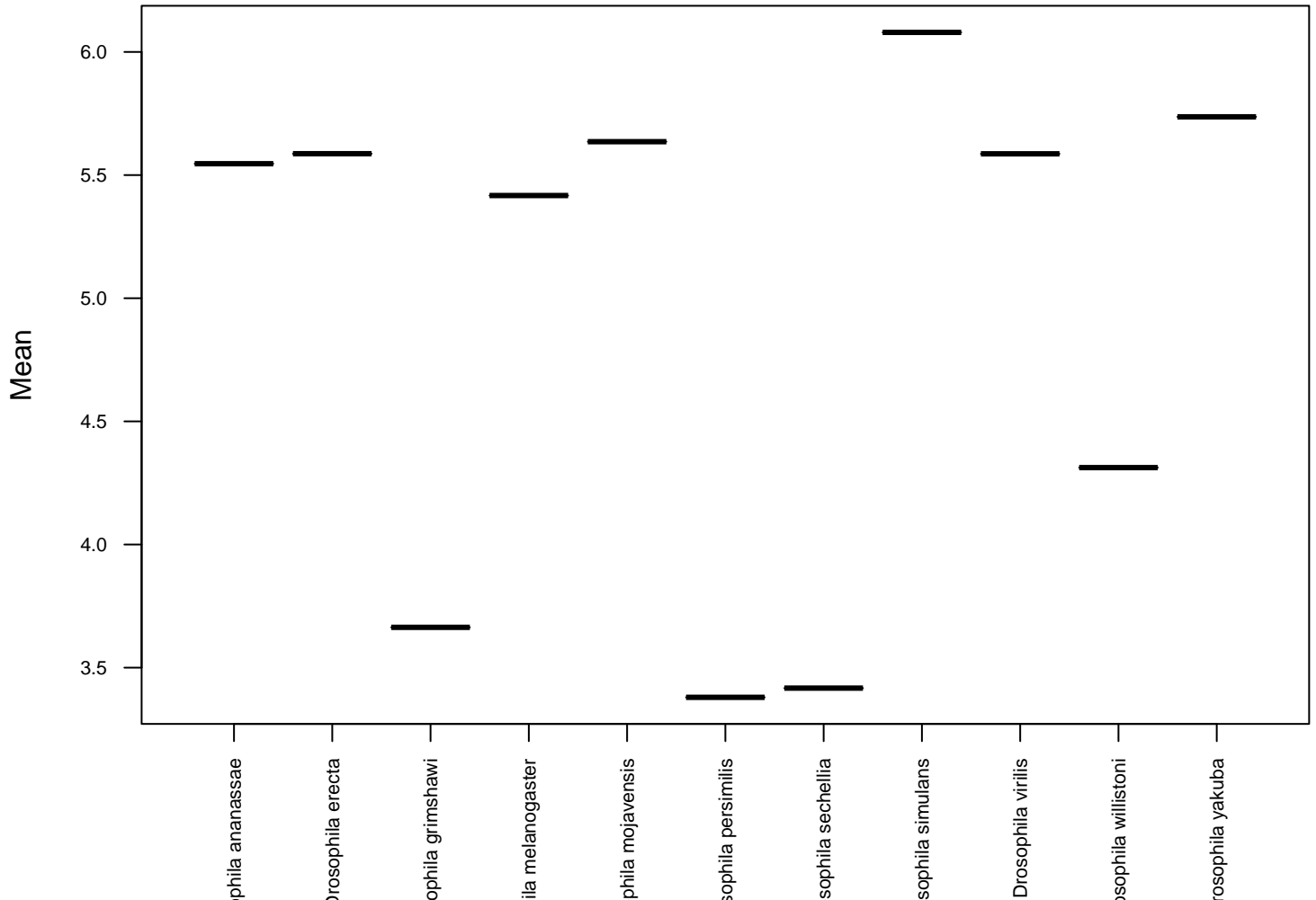**Chi−Sq = 11.02 p= 0.2744**

Drosophila Class Mean TpG
Kruskal−Wallis rank sum test
Chi−Sq = 14.26 p= 5.682e−08
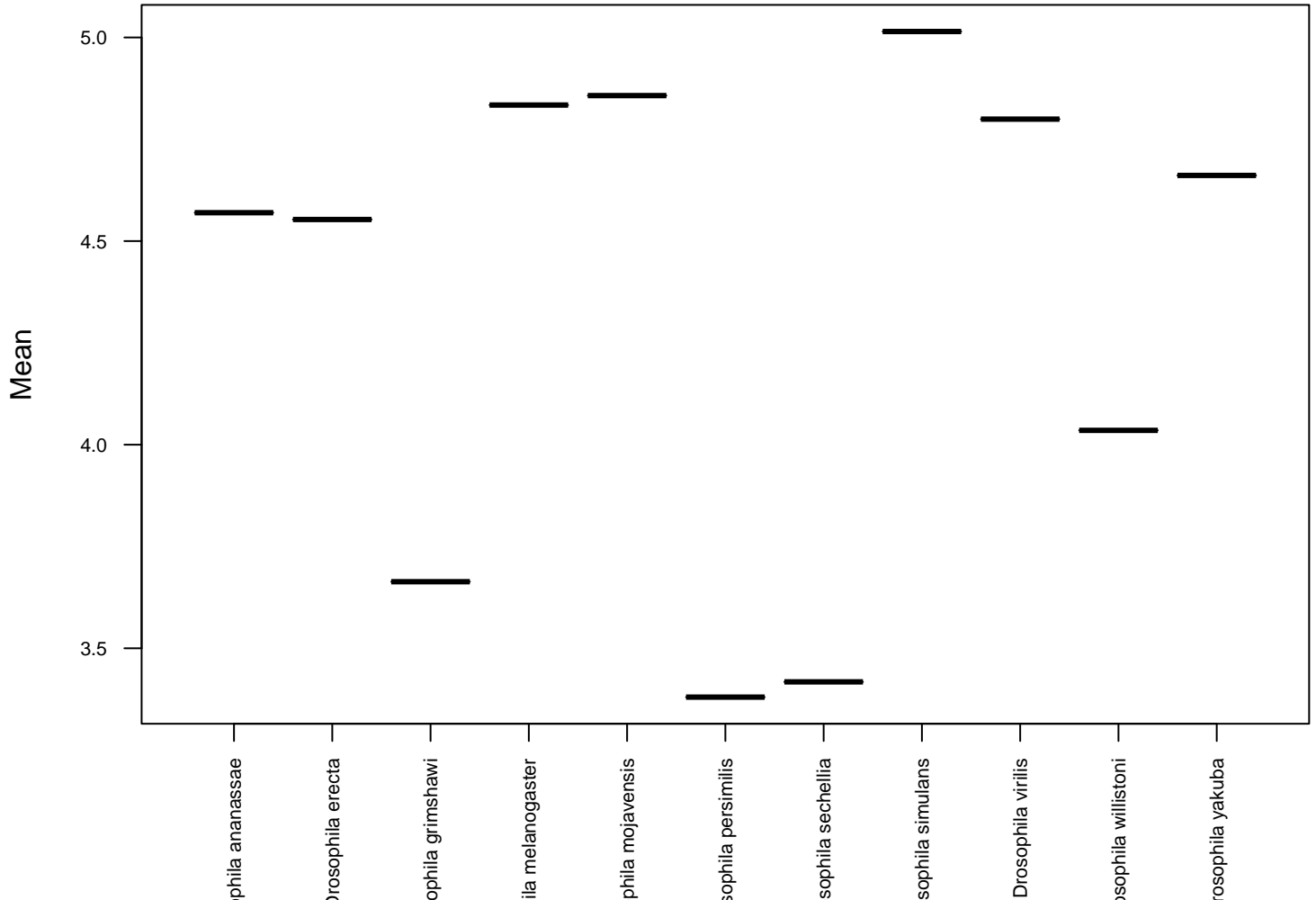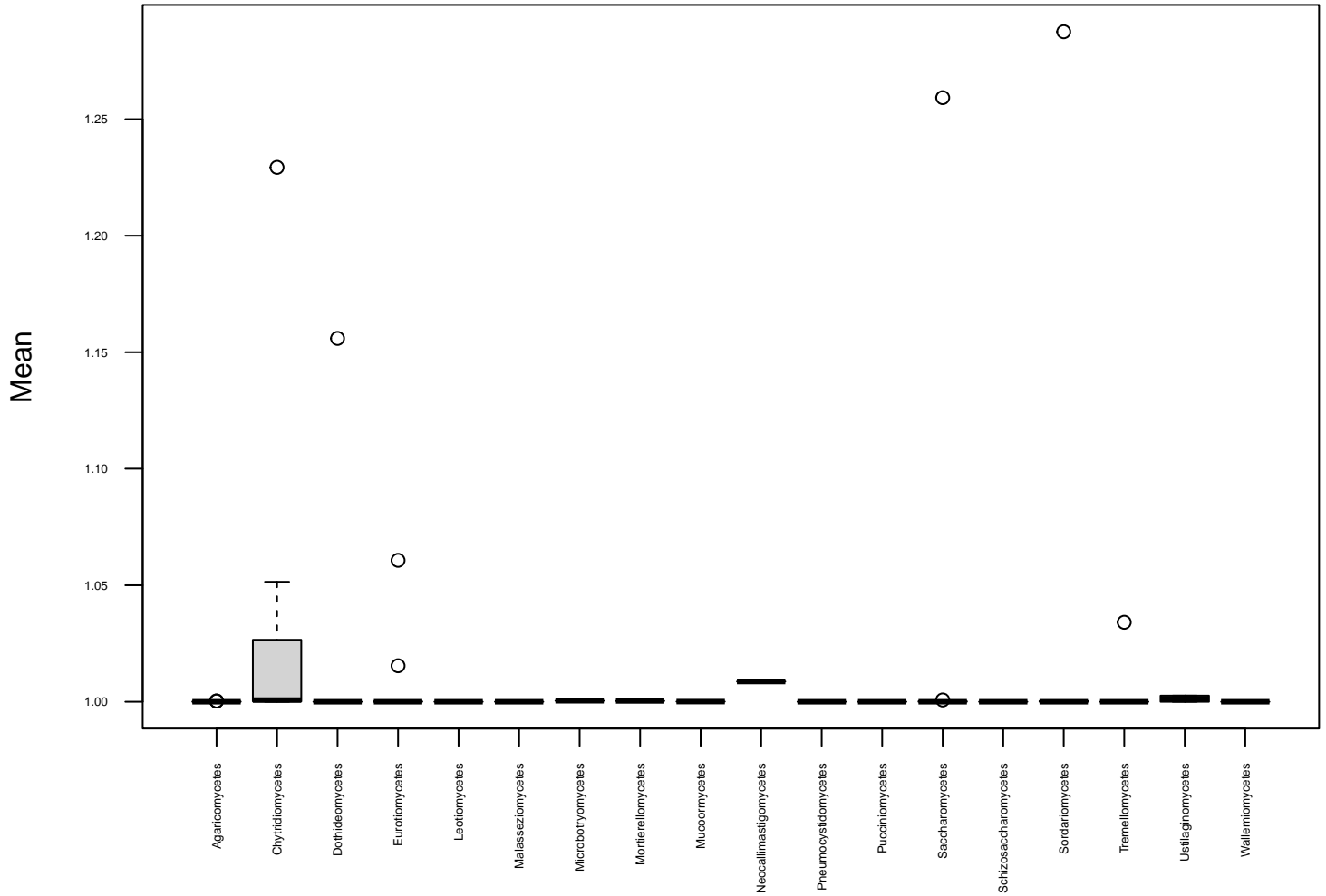
Mean

2.0

1.8

1.6

1.4

1.2

1.0

ophila ananassae

Drosophila erecta

ophila grimshawi

ila melanogaster

phila mojavensis

sophila persimilis

sophila sechellia

sophila simulans

Drosophila virilis

rosophila willistoni

rosophila yakuba

Drosophila Class Mean EpT
Kruskal−Wallis rank sum test
Chi−Sq = 66 p= 0.0009766

Mean axis labels: 3.5, 4.0, 4.5, 5.0, 5.5, 6.0

Category labels: ...ophila ananassae, ...Drosophila erecta, ...ophila grimshawi, ...ila melanogaster, ...phila mojavensis, ...sophila persimilis, ...sophila sechellia, ...sophila simulans, Drosophila virilis, ...sophila willistoni, ...rosophila yakuba

Drosophila Class Mean EpG
Kruskal−Wallis rank sum test
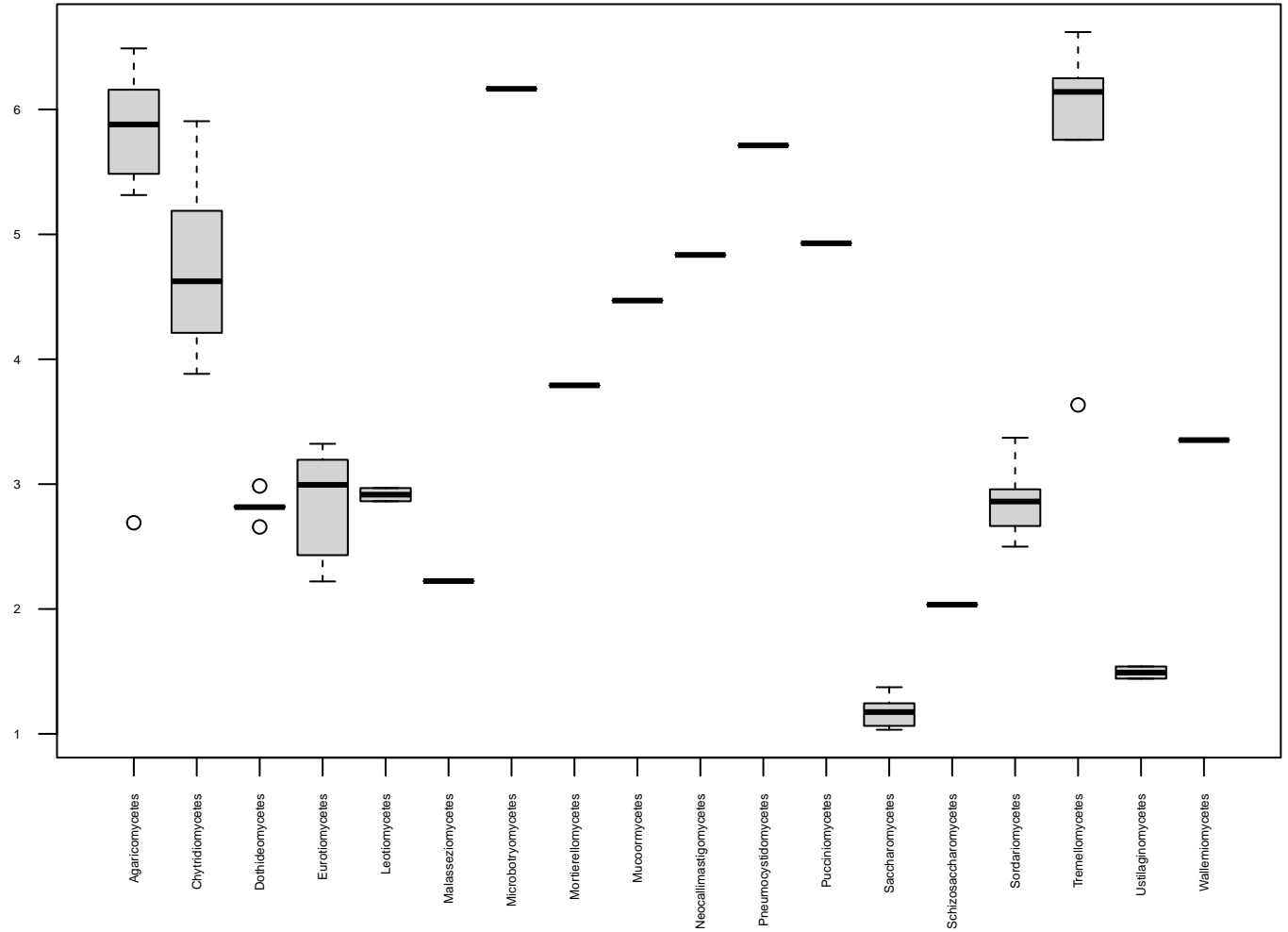**Chi−Sq = 66 p= 0.0009766**

Fungus Class Mean TpG
Kruskal−Wallis rank sum test
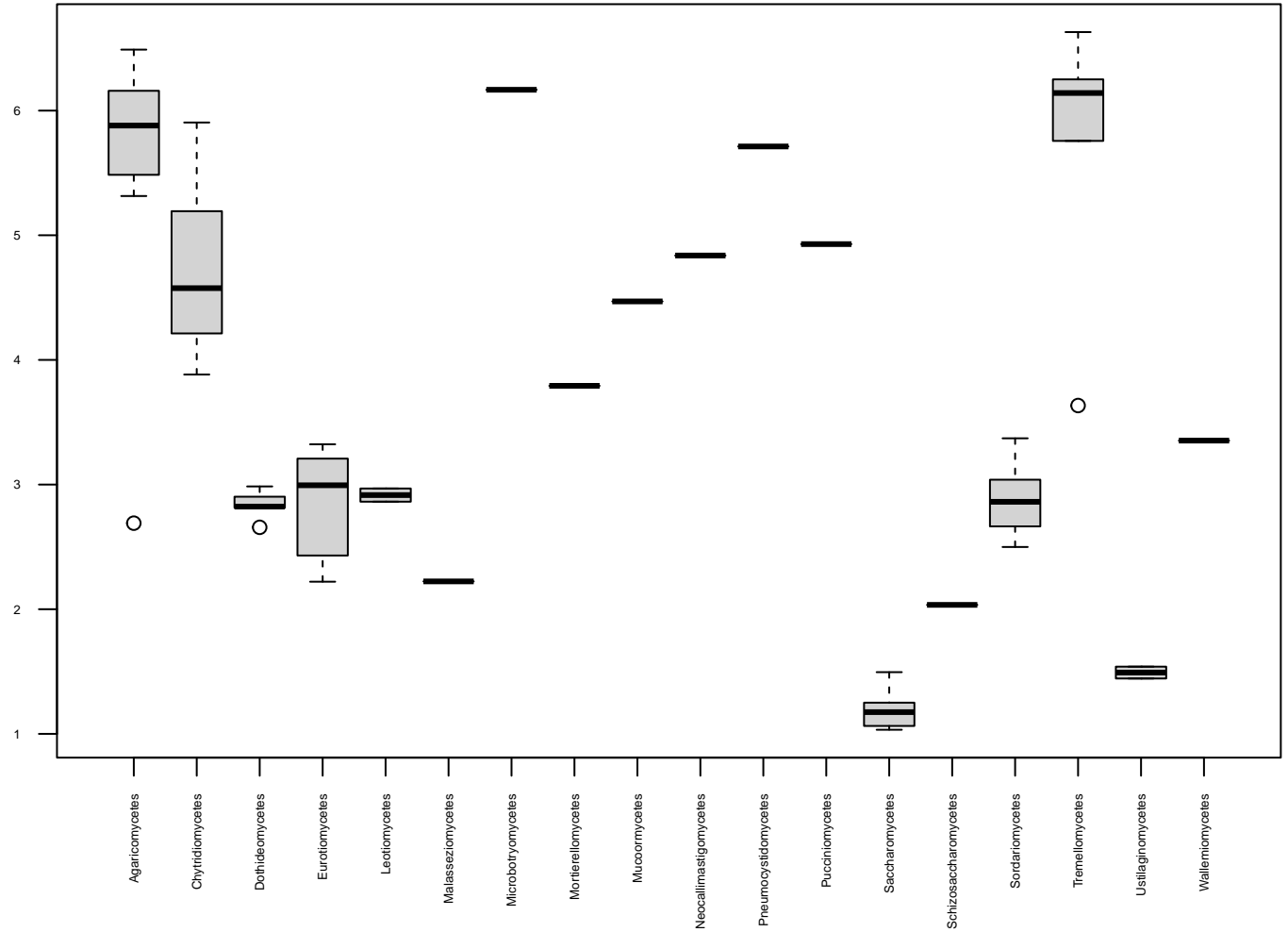**Chi−Sq = 17.84 p= 0.3989**

Fungus Class Mean EpT
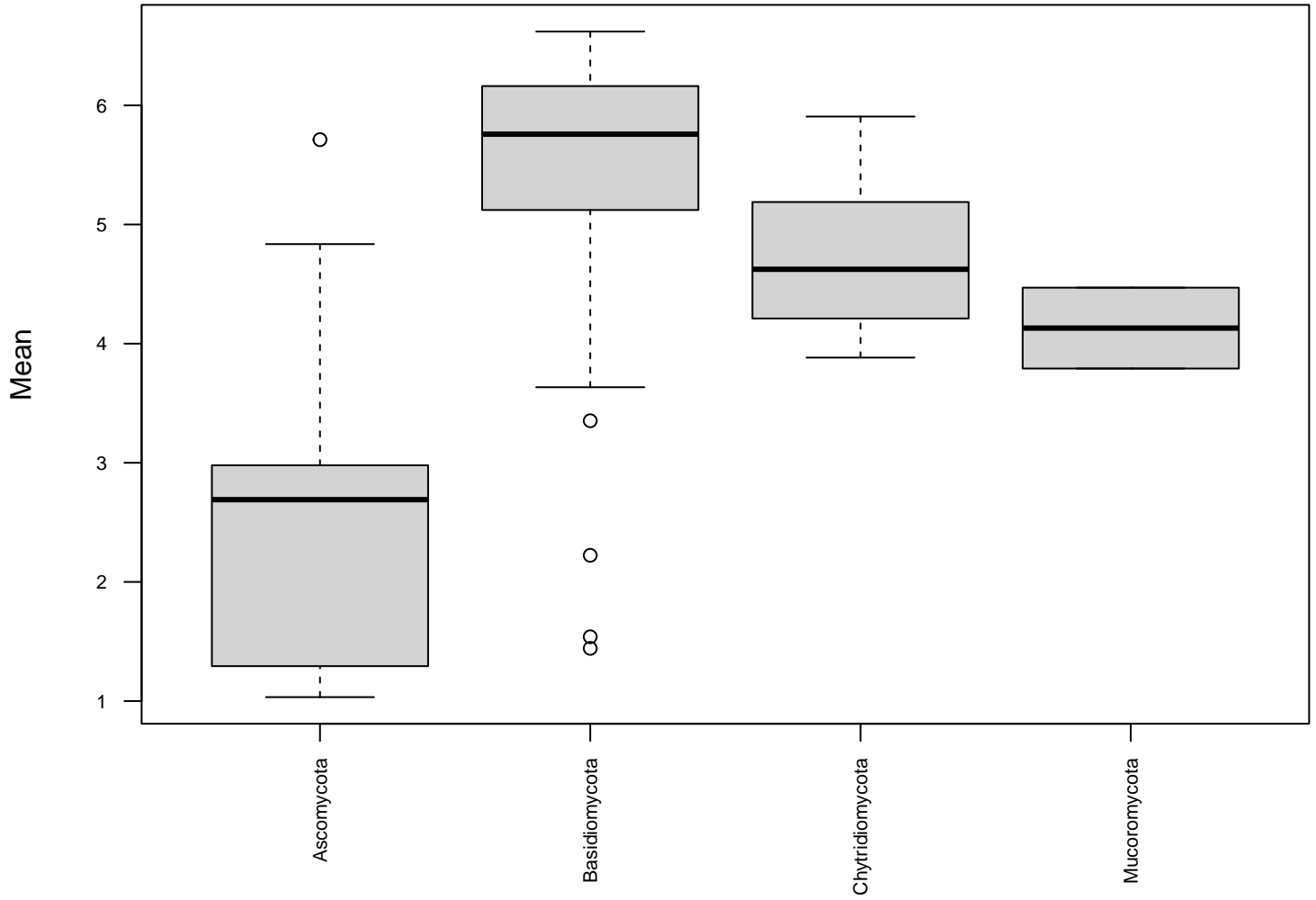**Kruskal–Wallis rank sum test**
Chi–Sq = 66.49 p= 8.578e−08

Fungus Class Mean EpG
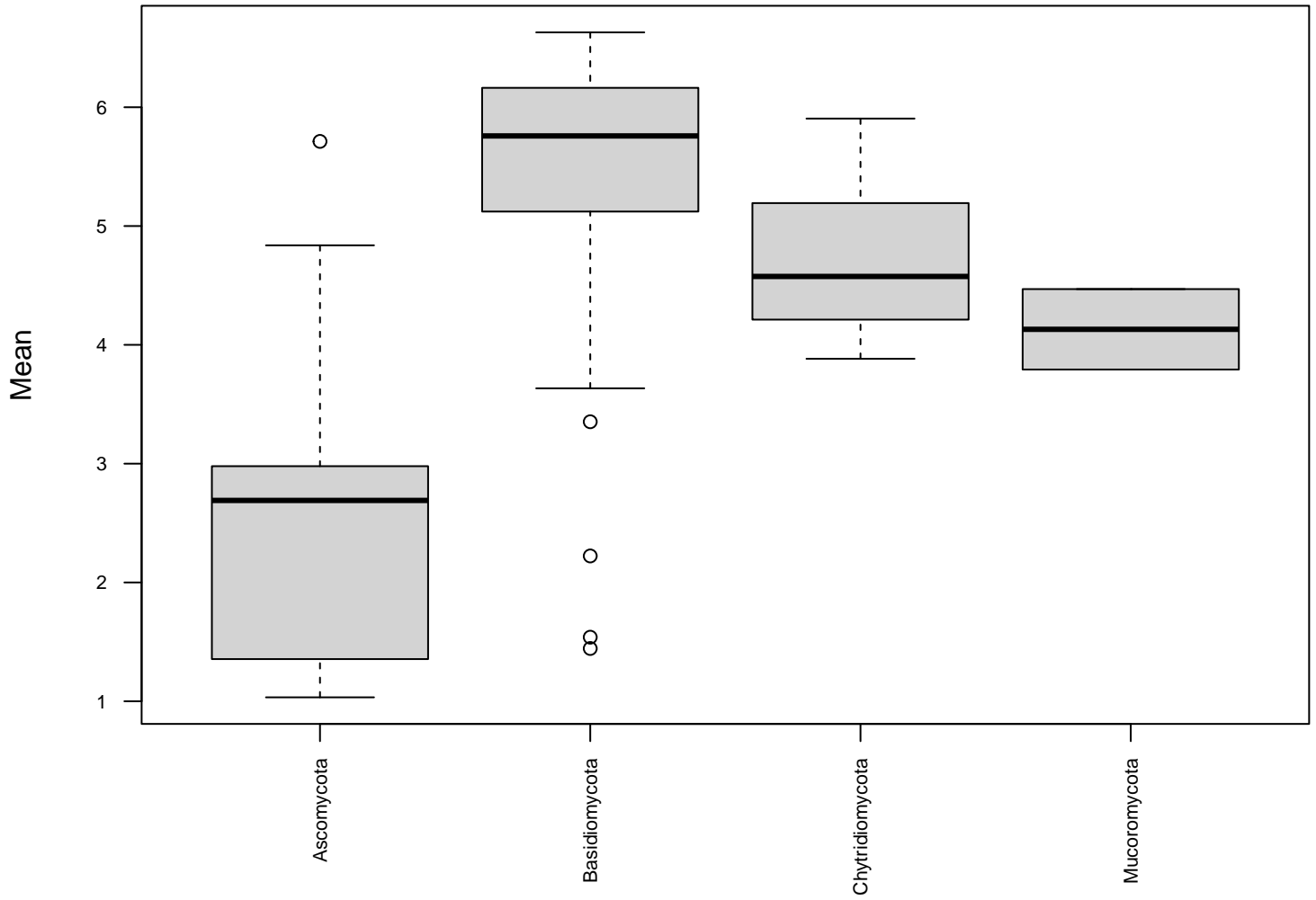**Kruskal−Wallis rank sum test**
Chi−Sq = 66.44 p= 8.763e−08

Fungus Phylum Mean TpG
Kruskal−Wallis rank sum test
Chi−Sq = 8.98 p= 0.02955

Fungus Phylum Mean EpT
Kruskal−Wallis rank sum test
Chi−Sq = 40.49 p= 8.389e−09

Mean

Ascomycota   Basidiomycota   Chytridiomycota   Mucoromycota

Fungus Phylum Mean EpG
Kruskal−Wallis rank sum test
Chi−Sq = 40.47 p= 8.467e−09

Mean

Ascomycota Basidiomycota Chytridiomycota Mucoromycota

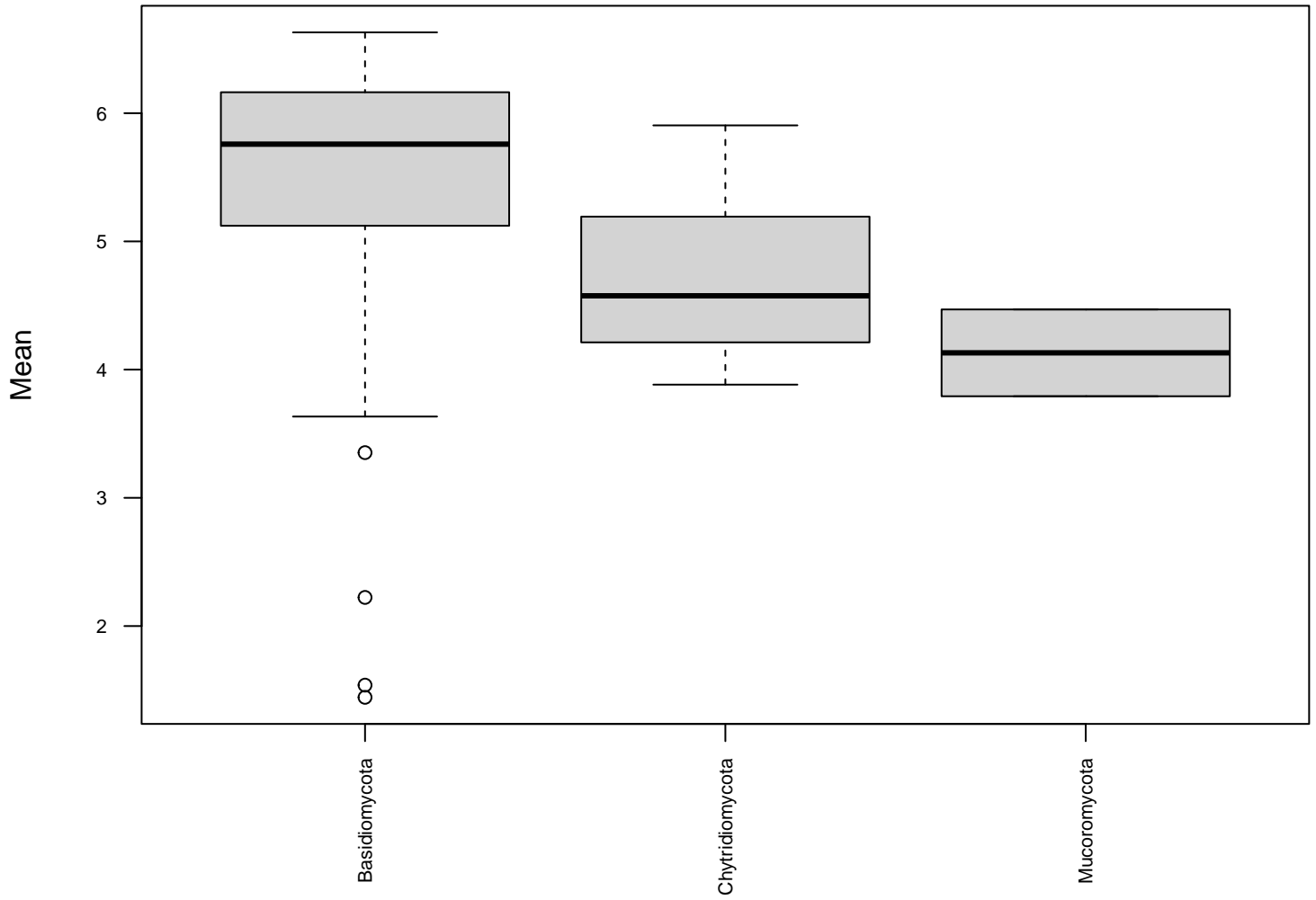**Fungus Phylum sans Ascomycota Mean EpT**
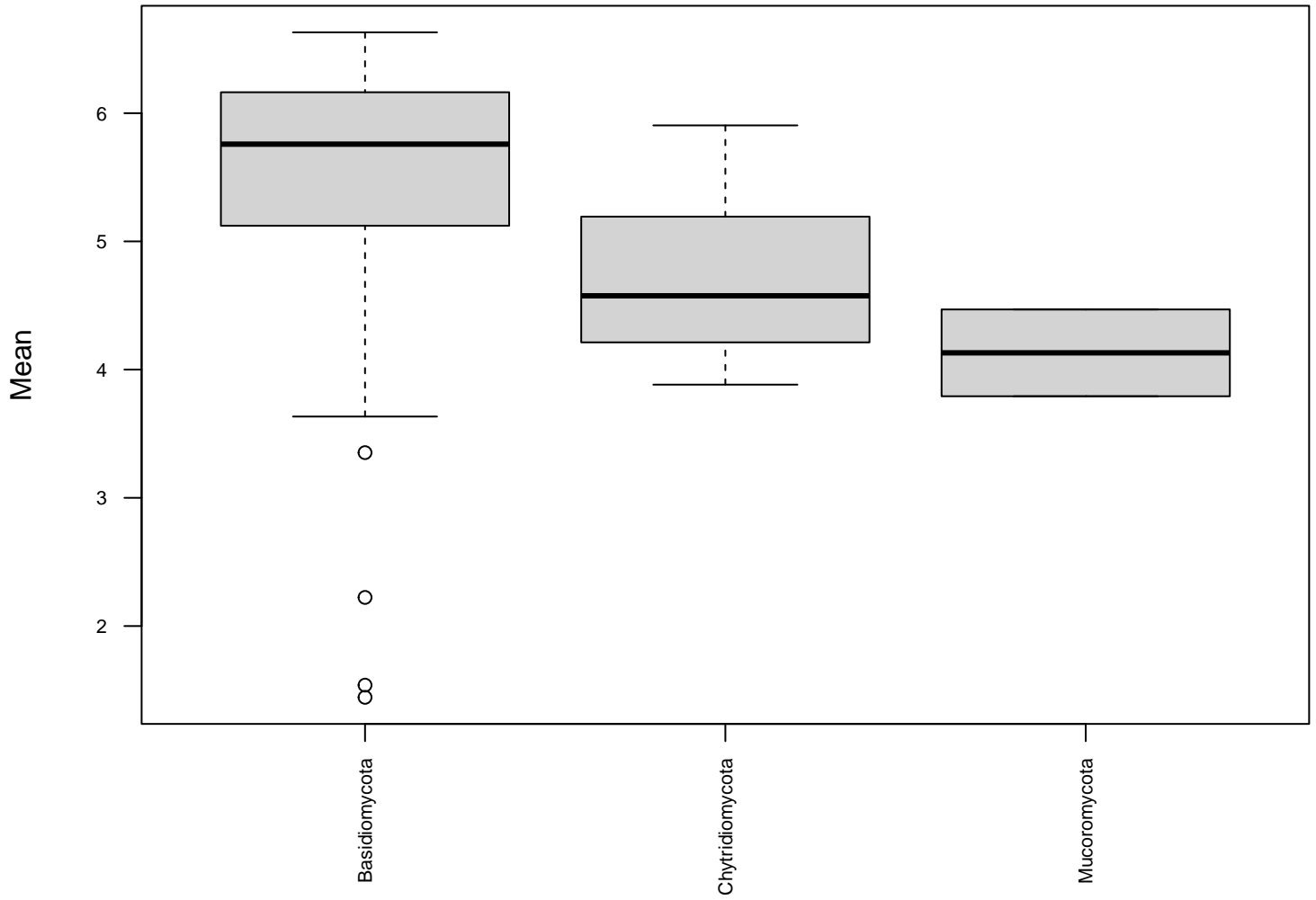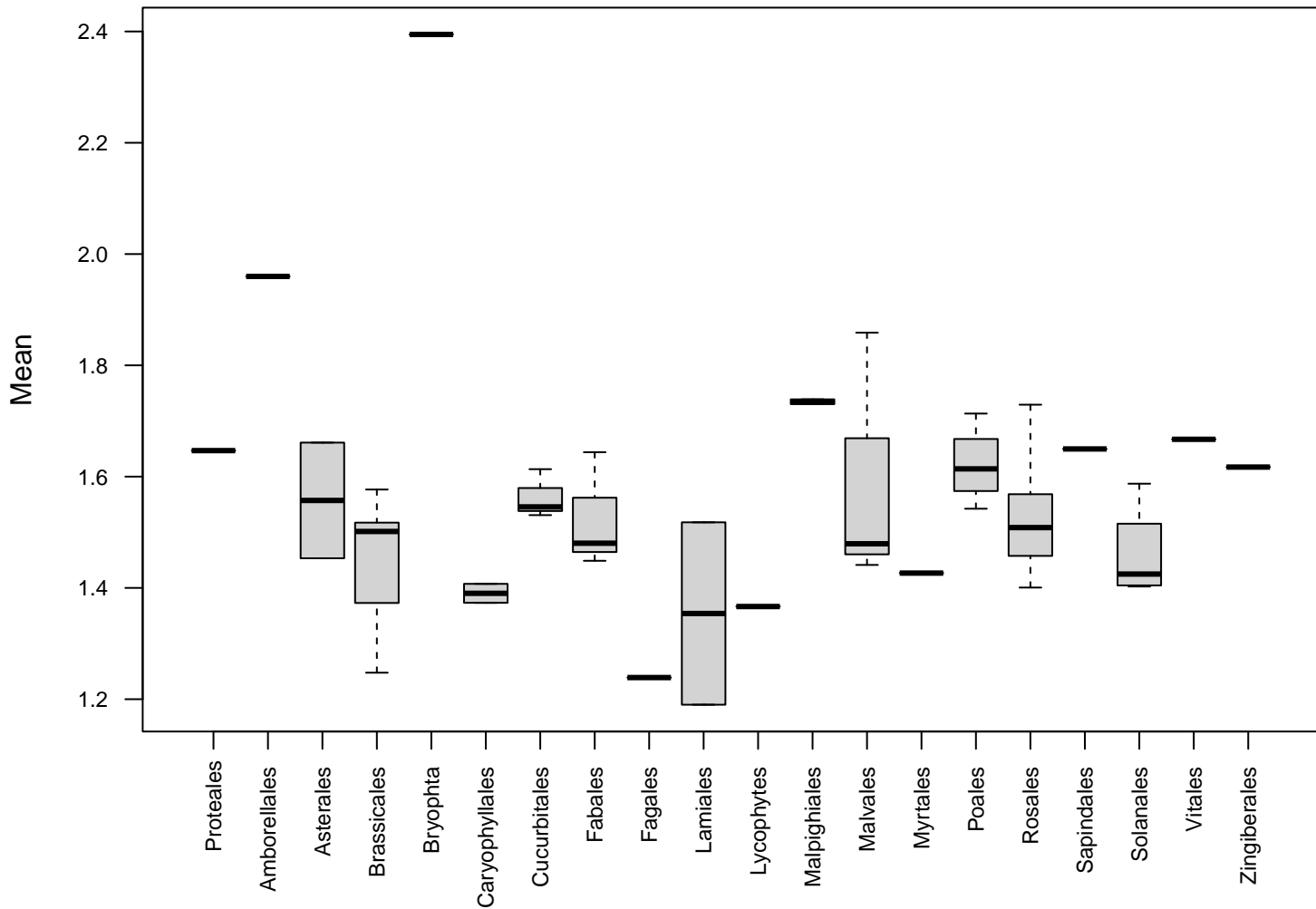**Kruskal−Wallis rank sum test**
Chi−Sq = 5.151 p= 0.07612

Fungus Phylum sans Ascomycota Mean EpG
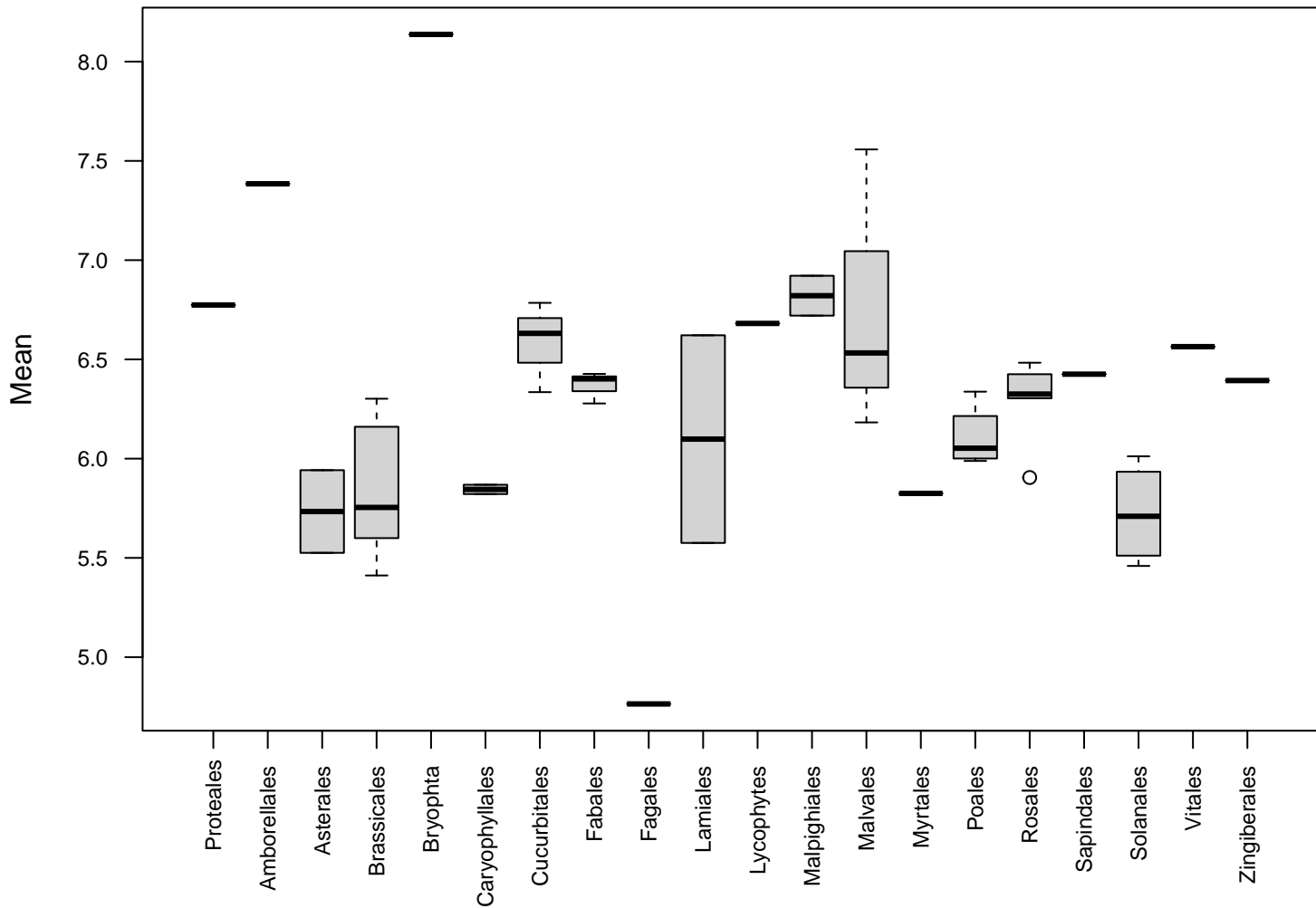**Kruskal−Wallis rank sum test**
Chi−Sq = 5.151 p= 0.07612

Plants Order Mean TpG
Kruskal−Wallis rank sum test
Chi−Sq = 27.47 p= 0.09409

Plants Order Mean EpT
Kruskal−Wallis rank sum test
Chi−Sq = 33.34 p= 0.02195

Plants Order Mean EpG
Kruskal−Wallis rank sum test
Chi−Sq = 33.65 p= 0.02021