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Symbiont genome

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In the Early Edition of the *Proceedings of the National Academy of Sciences* van Ham *et al.* report the sequencing of the genome of the intracellular symbiont *Buchnera aphidicola* from the aphid *Baizongia pistacea* (BBp) (*Proc Natl Acad Sci USA* 2002, 10.1073/pnas.02359811). As neither bacteria nor the host can be easily cultured in the laboratory, insects were collected from the field (from galls of a natural population on *Pistacia* trees), and bacterial DNA was then isolated for whole-genome shotgun sequencing. The BBp genome consists of a 616 kb chromosome and a 2,399 bp plasmid, containing 544 putative genes and nine pseudogenes. In addition, van Ham *et al.* found extensive intra-population variation and over 1,000 dimorphic SNPs. Comparison with two other sequenced *Buchnera* genomes revealed almost perfect chromosomal synteny; 78% of genes are present in all three genomes.

References

1. *Proceedings of the National Academy of Sciences*, [<http://www.pnas.org>]
2. Genetics, physiology, and evolutionary relationships of the genus *Buchnera*: intracellular symbionts of aphids.