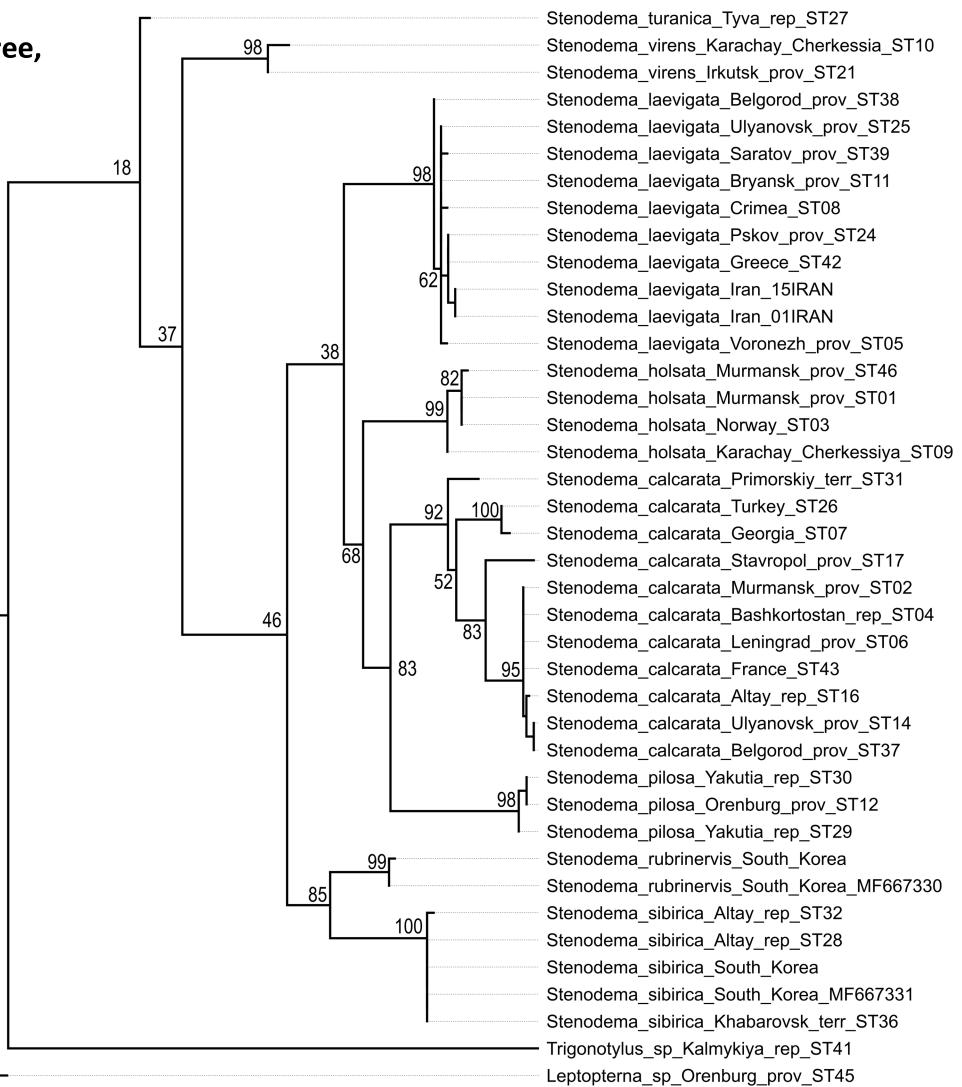


# COI-based RaxML tree for full dataset (124 terminals)

Stenodema\_calcarata\_Germany\_KM021949  
 Stenodema\_calcarata\_Germany\_KM022595  
 Stenodema\_calcarata\_Murmansk\_prov\_ST02  
 Stenodema\_calcarata\_Finland\_MZ631685  
 Stenodema\_calcarata\_Leningrad\_prov\_ST06  
 Stenodema\_calcarata\_Germany\_KM022989  
 Stenodema\_calcarata\_Germany\_KM023021  
 Stenodema\_calcarata\_Germany\_KM022869  
 Stenodema\_calcarata\_Germany\_KM021960  
 Stenodema\_calcarata\_Bashkortostan\_prov\_ST04  
 Stenodema\_calcarata\_Finland\_MZ656495  
 Stenodema\_calcarata\_Finland\_MZ656669  
 Stenodema\_calcarata\_Germany\_KM023068  
 Stenodema\_calcarata\_Germany\_KM021515  
 Stenodema\_calcarata\_Altai\_prov\_ST16  
 Stenodema\_calcarata\_France\_ST43  
 Stenodema\_calcarata\_Ulyanovsk\_prov\_ST14  
 Stenodema\_calcarata\_Belgorod\_prov\_ST37  
 Stenodema\_calcarata\_South\_Korea\_OL663375  
 Stenodema\_calcarata\_South\_Korea\_OL663374  
 Stenodema\_calcarata\_South\_Korea\_OL663376  
 Stenodema\_calcarata\_Primorskiy\_terr\_ST31  
 Stenodema\_calcarata\_Georgia\_ST07  
 Stenodema\_calcarata\_Iran\_28IRAN  
 Stenodema\_calcarata\_Turkey\_ST26  
 Stenodema\_calcarata\_Germany\_KM021898  
 Stenodema\_pilosa\_USA\_Alaska\_KU876242  
 Stenodema\_pilosa\_Canada\_KR575702  
 Stenodema\_pilosa\_Canada\_KR581161  
 Stenodema\_pilosa\_Canada\_GF937040  
 Stenodema\_pilosa\_Canada\_KR573601  
 Stenodema\_pilosa\_Canada\_KR574809  
 Stenodema\_pilosa\_Canada\_MG164925  
 Stenodema\_pilosa\_Canada\_KR582246  
 Stenodema\_pilosa\_Canada\_KR032213  
 Stenodema\_pilosa\_Canada\_GF938746  
 Stenodema\_pilosa\_Canada\_KR034997  
 Stenodema\_pilosa\_Canada\_GF930501  
 Stenodema\_pilosa\_Canada\_GF937672  
 Stenodema\_pilosa\_Finland\_MZ656655  
 Stenodema\_pilosa\_Finland\_MZ660633  
 Stenodema\_pilosa\_Yakutia\_rep\_ST30  
 Stenodema\_pilosa\_Orenburg\_prov\_ST12  
 Stenodema\_holsata\_Germany\_KM021829  
 Stenodema\_holsata\_Germany\_KM022581  
 Stenodema\_holsata\_Germany\_KM021489  
 Stenodema\_holsata\_Germany\_KM021735  
 Stenodema\_holsata\_Finland\_MZ633438  
 Stenodema\_holsata\_Murmansk\_prov\_ST46  
 Stenodema\_holsata\_Murmansk\_prov\_ST01  
 Stenodema\_holsata\_Norway\_ST03  
 Stenodema\_holsata\_Finland\_MZ632415  
 Stenodema\_holsata\_Finland\_MZ632032  
 Stenodema\_holsata\_Norway\_KM287254  
 Stenodema\_holsata\_Germany\_KM022402  
 Stenodema\_holsata\_Germany\_KM022857  
 Stenodema\_holsata\_Karachay-Cherkessia ST09  
 Stenodema\_holsata\_France\_KJ541527  
 Stenodema\_holsata\_France\_KJ541604  
 Stenodema\_holsata\_France\_KJ541528  
 Stenodema\_holsata\_France\_KJ541538  
 Stenodema\_holsata\_France\_KJ541522  
 Stenodema\_holsata\_France\_KJ541590  
 Stenodema\_holsata\_France\_KJ541526  
 Stenodema\_laevigata\_Germany\_KM022142  
 Stenodema\_laevigata\_Voronezh\_prov\_ST05  
 Stenodema\_laevigata\_Greece\_ST42  
 Stenodema\_laevigata\_Iran\_15IRAN  
 Stenodema\_laevigata\_Crimea\_ST08  
 Stenodema\_laevigata\_Portugal\_MW536092  
 Stenodema\_laevigata\_Finland\_MZ629499  
 Stenodema\_laevigata\_Finland\_MZ630187  
 Stenodema\_laevigata\_Saratov\_prov\_ST39  
 Stenodema\_laevigata\_Belgorod\_prov\_ST38  
 Stenodema\_laevigata\_Bryansk\_prov\_ST11  
 Stenodema\_laevigata\_Ulyanovsk\_prov\_ST25  
 Stenodema\_laevigata\_Germany\_KM021700  
 Stenodema\_laevigata\_Germany\_KM022947  
 Stenodema\_laevigata\_France\_KJ541577  
 Stenodema\_laevigata\_Germany\_KM022395  
 Stenodema\_laevigata\_Germany\_KM021476  
 Stenodema\_laevigata\_Germany\_KM022751  
 Stenodema\_laevigata\_Germany\_KM021771  
 Stenodema\_laevigata\_Germany\_KM022371  
 Stenodema\_laevigata\_Germany\_KM023087  
 Stenodema\_laevigata\_France\_KJ541537  
 Stenodema\_laevigata\_France\_KJ541531  
 Stenodema\_laevigata\_France\_KJ541532  
 Stenodema\_laevigata\_Portugal\_MW535964  
 Stenodema\_sericans\_France\_KJ541615  
 Stenodema\_sericans\_France\_KJ541632  
 Stenodema\_sericans\_Germany\_KM022559  
 Stenodema\_pilosipes\_Canada\_KR581562  
 Stenodema\_pilosipes\_Canada\_KR032850  
 Stenodema\_vicina\_Canada\_KR034171  
 Stenodema\_vicina\_Canada\_GF936192  
 Stenodema\_vicina\_Canada\_KR575728  
 Stenodema\_vicina\_Canada\_KR574511  
 Stenodema\_vicina\_Canada\_KR583053  
 Stenodema\_turanica\_Iran\_54IRAN  
 Stenodema\_turanica\_Iran\_53IRAN  
 Stenodema\_turanica\_Tyva\_rep\_ST27  
 Stenodema\_virens\_Karachay-Cherkessia rep\_ST10  
 Stenodema\_virens\_Finland\_MZ657175  
 Stenodema\_virens\_Georgia\_ST40  
 Stenodema\_virens\_Irkutsk\_prov\_ST21  
 Stenodema\_sibirica\_South\_Korea\_KY367180  
 Stenodema\_sibirica\_South\_Korea\_KY367179  
 Stenodema\_sibirica\_Khabarovsk\_terr\_ST36  
 Stenodema\_sibirica\_South\_Korea\_GQ292111  
 Stenodema\_sibirica\_South\_Korea\_GU194833  
 Stenodema\_sibirica\_Altai\_rep\_ST28  
 Stenodema\_sibirica\_Altai\_rep\_ST32  
 Stenodema\_rubrinervis\_South\_Korea\_KY367177  
 Stenodema\_rubrinervis\_South\_Korea\_KY367178  
 Stenodema\_rubrinervis\_South\_Korea\_GF929099  
 Stenodema\_rubrinervis\_South\_Korea\_KY367176  
 Trigonytus\_sp\_Kalmykia\_ST41  
 Leptopterma\_sp\_Orenburg\_prov\_ST45

0.05

# 16S-based RaxML tree, 40 terminals

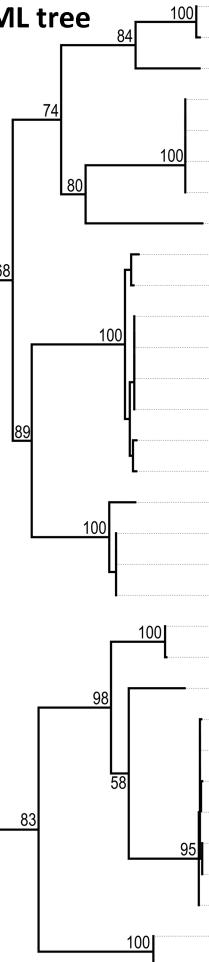


0.04

**Combined (COI+16S) RaxML tree  
for all taxa (124 terminals)**

Stenodema\_calcarata\_Turkey\_ST26  
 Stenodema\_calcarata\_Iran\_28IRAN  
 Stenodema\_calcarata\_Georgia\_ST07  
 Stenodema\_calcarata\_Germany\_KM021898  
 Stenodema\_calcarata\_Primorsky\_terr\_ST31  
 Stenodema\_calcarata\_South\_Korea\_OL663375  
 Stenodema\_calcarata\_South\_Korea\_DL663374  
 Stenodema\_calcarata\_South\_Korea\_DL663376  
 Stenodema\_calcarata\_Leningrad\_prov\_ST06  
 Stenodema\_calcarata\_Germany\_KM023068  
 Stenodema\_calcarata\_Germany\_KM023021  
 Stenodema\_calcarata\_Finland\_MZ656669  
 Stenodema\_calcarata\_Germany\_KM022989  
 Stenodema\_calcarata\_Finland\_MZ656495  
 Stenodema\_calcarata\_Germany\_KM022869  
 Stenodema\_calcarata\_Germany\_KM021960  
 Stenodema\_calcarata\_Bashkortostan\_rep\_ST04  
 Stenodema\_calcarata\_Germany\_KM021515  
 Stenodema\_calcarata\_Germany\_KM022595  
 Stenodema\_calcarata\_Germany\_KM021949  
 Stenodema\_calcarata\_Belgorod\_prov\_ST37  
 Stenodema\_calcarata\_Ulyanovsk\_prov\_ST14  
 Stenodema\_calcarata\_Finland\_MZ631685  
 Stenodema\_calcarata\_Altay\_rep\_ST16  
 Stenodema\_calcarata\_Murmansk\_prov\_ST02  
 Stenodema\_calcarata\_France\_ST43  
 Stenodema\_calcarata\_Stavropol\_prov\_ST17  
 Stenodema\_pilosa\_Canada\_KR034997  
 Stenodema\_pilosa\_Canada\_MF938746  
 Stenodema\_pilosa\_Canada\_KR032213  
 Stenodema\_pilosa\_Canada\_MF937672  
 Stenodema\_pilosa\_Canada\_MF930501  
 Stenodema\_pilosa\_Finland\_MZ660633  
 Stenodema\_pilosa\_Finland\_MZ656655  
 Stenodema\_pilosa\_Yakutia\_rep\_ST29  
 Stenodema\_pilosa\_Yakutia\_rep\_ST30  
 Stenodema\_pilosa\_Orenburg\_prov\_ST12  
 Stenodema\_pilosa\_USA\_Alaska\_KU876242  
 Stenodema\_pilosa\_Canada\_KR581161  
 Stenodema\_pilosa\_Canada\_KR575702  
 Stenodema\_pilosa\_Canada\_MF937040  
 Stenodema\_pilosa\_Canada\_KR574809  
 Stenodema\_pilosa\_Canada\_KR573601  
 Stenodema\_pilosa\_Canada\_MG164925  
 Stenodema\_pilosa\_Canada\_KR582246  
 Stenodema\_turanica\_Iran\_54IRAN  
 Stenodema\_turanica\_Iran\_53IRAN  
 Stenodema\_turanica\_Tyva\_rep\_ST27  
 Stenodema\_virens\_Finland\_MZ657175  
 Stenodema\_virens\_Georgia\_ST40  
 Stenodema\_virens\_Irkutsk\_prov\_ST21  
 Stenodema\_virens\_Karachay-Cherkessia\_rep\_ST10  
 Stenodema\_pilosipes\_Canada\_KR581562  
 Stenodema\_pilosipes\_Canada\_KR032850  
 Stenodema\_vicina\_Canada\_KR575728  
 Stenodema\_vicina\_Canada\_MF936192  
 Stenodema\_vicina\_Canada\_KR034171  
 Stenodema\_vicina\_Canada\_KR583053  
 Stenodema\_vicina\_Canada\_KR574511  
 Stenodema\_rubrineris\_South\_Korea\_MF667330  
 Stenodema\_rubrineris\_South\_Korea\_KY367177  
 Stenodema\_rubrineris\_South\_Korea\_GQ292099  
 Stenodema\_rubrineris\_South\_Korea\_KY367176  
 Stenodema\_rubrineris\_South\_Korea\_GU194603  
 Stenodema\_sibirica\_South\_Korea\_KY367180  
 Stenodema\_sibirica\_South\_Korea\_MF667331  
 Stenodema\_sibirica\_Altay\_rep\_ST28  
 Stenodema\_sibirica\_South\_Korea\_GU194604  
 Stenodema\_sibirica\_Khabarovsk\_terr\_ST36  
 Stenodema\_sibirica\_South\_Korea\_GQ292111  
 Stenodema\_sibirica\_Altay\_rep\_ST32  
 Stenodema\_sibirica\_South\_Korea\_KY367179  
 Stenodema\_sericans\_France\_KJ541632  
 Stenodema\_sericans\_France\_KJ541615  
 Stenodema\_sericans\_Germany\_KM022559  
 Stenodema\_laevigata\_Greece\_ST42  
 Stenodema\_laevigata\_Germany\_KM022142  
 Stenodema\_laevigata\_Voronezh\_prov\_ST05  
 Stenodema\_laevigata\_Ulyanovsk\_prov\_ST25  
 Stenodema\_laevigata\_Bryansk\_prov\_ST11  
 Stenodema\_laevigata\_Germany\_KM021700  
 Stenodema\_laevigata\_France\_KJ541577  
 Stenodema\_laevigata\_Finland\_MZ630187  
 Stenodema\_laevigata\_Finland\_MZ629499  
 Stenodema\_laevigata\_Portugal\_MW536092  
 Stenodema\_laevigata\_Portugal\_MW535964  
 Stenodema\_laevigata\_France\_KJ541537  
 Stenodema\_laevigata\_France\_KJ541532  
 Stenodema\_laevigata\_France\_KJ541531  
 Stenodema\_laevigata\_Germany\_KM023087  
 Stenodema\_laevigata\_Belgorod\_prov\_ST38  
 Stenodema\_laevigata\_Germany\_KM022751  
 Stenodema\_laevigata\_Germany\_KM022947  
 Stenodema\_laevigata\_Germany\_KM021476  
 Stenodema\_laevigata\_Germany\_KM022395  
 Stenodema\_laevigata\_Saratov\_prov\_ST39  
 Stenodema\_laevigata\_Germany\_KM022371  
 Stenodema\_laevigata\_Germany\_KM021771  
 Stenodema\_laevigata\_Iran\_15IRAN  
 Stenodema\_laevigata\_Iran\_01IRAN  
 Stenodema\_laevigata\_Crimea\_ST08  
 Stenodema\_laevigata\_Pskov\_prov\_ST24  
 Stenodema\_holsata\_Murmansk\_prov\_ST01  
 Stenodema\_holsata\_Norway\_ST03  
 Stenodema\_holsata\_Finland\_MZ632415  
 Stenodema\_holsata\_Finland\_MZ632032  
 Stenodema\_holsata\_Norway\_KM287254  
 Stenodema\_holsata\_Murmansk\_prov\_ST46  
 Stenodema\_holsata\_Finland\_MZ633438  
 Stenodema\_holsata\_Germany\_KM022857  
 Stenodema\_holsata\_Germany\_KM022402  
 Stenodema\_holsata\_Germany\_KM022581  
 Stenodema\_holsata\_Germany\_KM021489  
 Stenodema\_holsata\_Germany\_KM021735  
 Stenodema\_holsata\_France\_KJ541522  
 Stenodema\_holsata\_France\_KJ541538  
 Stenodema\_holsata\_France\_KJ541526  
 Stenodema\_holsata\_France\_KJ541528  
 Stenodema\_holsata\_France\_KJ541590  
 Stenodema\_holsata\_France\_KJ541604  
 Stenodema\_holsata\_France\_KJ541527  
 Stenodema\_holsata\_Germany\_KM021829  
 Stenodema\_holsata\_Karachay-Cherkessia\_rep\_ST09  
 Trigonotylus\_sp\_Kalmykia\_rep\_ST41  
 Leptopterna\_sp\_Orenburg\_prov\_ST45

**Combined (COI+16S) RaxML tree  
for reduced dataset  
(34 terminals)**



- Stenodema\_virens\_Irkutsk\_prov\_ST21
- Stenodema\_virens\_Karachay-Cherkessia\_rep\_ST10
- Stenodema\_turanica\_Tyva\_rep\_ST27
- Stenodema\_sibirica\_Khabarovsk\_terr\_ST36
- Stenodema\_sibirica\_Altay\_rep\_ST28
- Stenodema\_sibirica\_Altay\_rep\_ST32
- Stenodema\_sibirica\_South\_Korea\_GU194604
- Stenodema\_rubrinervis\_South\_Korea\_GU194603
- Stenodema\_laevigata\_Voronezh\_prov\_ST05
- Stenodema\_laevigata\_Greece\_ST42
- Stenodema\_laevigata\_Saratov\_prov\_ST39
- Stenodema\_laevigata\_Bryansk\_prov\_ST11
- Stenodema\_laevigata\_Belgorod\_prov\_ST38
- Stenodema\_laevigata\_Ulyanovsk\_prov\_ST25
- Stenodema\_laevigata\_Iran\_15IRAN
- Stenodema\_laevigata\_Crimea\_ST08
- Stenodema\_holsata\_Karachay-Cherkessia\_rep\_ST09
- Stenodema\_holsata\_Murmansk\_prov\_ST01
- Stenodema\_holsata\_Norway\_ST03
- Stenodema\_holsata\_Murmansk\_prov\_ST46
- Stenodema\_calcarata\_Turkey\_ST26
- Stenodema\_calcarata\_Georgia\_ST07
- Stenodema\_calcarata\_Primorsky\_terr\_ST31
- Stenodema\_calcarata\_Altay\_rep\_ST16
- Stenodema\_calcarata\_Murmansk\_prov\_ST02
- Stenodema\_calcarata\_Bashkortostan\_rep\_ST04
- Stenodema\_calcarata\_Leningrad\_prov\_ST06
- Stenodema\_calcarata\_Belgorod\_prov\_ST37
- Stenodema\_calcarata\_Ulyanovsk\_prov\_ST14
- Stenodema\_calcarata\_France\_ST43
- Stenodema\_pilosa\_Orenburg\_prov\_ST12
- Stenodema\_pilosa\_Yakutia\_rep\_ST30
- Trigonotylus\_sp\_Kalmykia\_rep\_ST41
- Leptopterna\_sp\_Orenburg\_prov\_ST45

0.2