



## Exploring diversity in cryptorhynchine weevils (Coleoptera) using distance-, character- and tree-based species delineation

Jonas J. Astrin<sup>a,\*</sup>, Peter E. Stüben<sup>b</sup>, Bernhard Misof<sup>a</sup>, J. Wolfgang Wägele<sup>a</sup>, France Gimnich<sup>c</sup>, Michael J. Raupach<sup>d</sup>, Dirk Ahrens<sup>a</sup>

<sup>a</sup>ZFMK: Zoologisches Forschungsmuseum Alexander Koenig, Adenauerallee 160, D-53113 Bonn, Germany

<sup>b</sup>Curculio Institute, Hauweg 62, D-41066 Mönchengladbach, Germany

<sup>c</sup>Museum für Naturkunde Berlin, Invalidenstraße 43, D-10115 Berlin, Germany

<sup>d</sup>Forschungsinstitut Senckenberg, Deutsches Zentrum für Marine Biodiversitätsforschung, Südstrand 44, D-26382 Wilhelmshaven, Germany

### ARTICLE INFO

#### Article history:

Received 9 March 2011

Revised 9 November 2011

Accepted 21 November 2011

Available online 2 December 2011

#### Keywords:

DNA taxonomy

Species delimitation

DNA barcoding gap

Generalized mixed Yule-coalescent (GMYC)

16S

COI

Western Palearctic

Cryptorhynchinae

Curculionidae

### ABSTRACT

Species boundaries are studied in a group of beetles, the western Palearctic Cryptorhynchinae. We test for congruence of 'traditionally' identified morphospecies with species inferred through parsimony networks, distance-based clustering and the ultrametric tree-based generalized mixed yule-coalescent (GMYC) approach. For that purpose, we sequenced two variable fragments of mitochondrial DNA (CO1 and 16S) for a total of 791 specimens in 217 species of Cryptorhynchinae. Parsimony networks, morphology-calibrated distance clusters and the different tree-based species inferences all achieved low congruence with morphospecies, at best 60%. Although the degree of match with morphospecies was often similar for the different approaches, the composition of clusters partially varied. A barcoding gap was absent in morphospecies-oriented distances as well as for GMYC species clusters. This demonstrates that not only erroneous taxonomic assignments, incomplete lineage sorting, hybridization, or insufficient sampling can compromise distance-based identification, but also differences in speciation rates and uneven tree structure. The initially low match between morphospecies and the different molecular species delineation methods in this case study shows the necessity of combining the output of various methods in an integrative approach. Thereby we obtain an idea about the reliability of the different results and signals, which enables us to fine-tune sampling, delineation technique and data collection, and to identify species that require taxonomic revision.

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### 1. Introduction

The analysis of genetic data holds special promise for the taxonomy of morphologically cryptic taxa (e.g. Knowlton, 2000; Sweijdt et al., 2000; Parsons and Shaw, 2001; Eyualem and Blaxter, 2003; Blaxter et al., 2004; Ciniglia et al., 2004; Huang et al., 2007; Andrés-Sánchez et al., 2009; Schönhofer and Martens, 2010; Malausa et al., 2011). We here focus on beetles from such a group, the western Palearctic Cryptorhynchinae, in which many species can be morphologically recognized only based on male genitalia (these sometimes being ambiguous as well). Usually larvae are impossible to identify morphologically, as well as adult females in many cases. With more than 6000 described species worldwide, the weevil subfamily Cryptorhynchinae is one of the largest subfamilies of weevils (Curculionoidea) (the family Curculionidae comprises around 100,000 species; Alonso-Zarazaga et al., 2010). They often show mimetic coloration, especially in temperate

zones. Many species of Cryptorhynchinae are apterous. This is unusual in Pterygota (winged insects), out of which only about 5% extant species are flightless (Whiting et al., 2003), but it is more widespread in weevils. Western Palearctic representatives of the subfamily currently comprise around 360 often endemic species (Stüben, 2010) and almost all of these were subject to recent, i.e. modern, taxonomic revisions (Savitsky, 1997; Stüben and Behne, 1998; Stüben, 1998, 1999a,b, 2003, 2004; Bahr, 2000; Stüben and Germann, 2005). Their body size ranges between 1.2 and 10 mm and their larvae develop in stressed or dying lignified parts of plants. In some regions, such as the northern part of Europe, Cryptorhynchinae are considered potentially valuable bioindicators for old, undisturbed woodlots (Strejcek, 1989; Stüben, 2005). However, their difficult identification due to poor interspecific morphological variation has so far impeded their use in conservation, ecology or forestry. Previous studies that used a combination of molecular and morphological evidence focusing on the systematics of western Palearctic Cryptorhynchinae (Astrin and Stüben, 2008, 2009, 2011; Stüben and Astrin, 2010a,b) attempted to overcome these problems. However, the match of species boundaries based

\* Corresponding author.

E-mail address: [j.astrin.zfmk@uni-bonn.de](mailto:j.astrin.zfmk@uni-bonn.de) (J.J. Astrin).

on 'traditional' morphological data (morphospecies criterion) and on DNA sequence data (genospecies criterion) have so far been explored only in a few limited cases in this group, as has the reciprocal insight that can be derived from these two delineation approaches.

In this group of cryptorhynchine weevils our aim was to test for congruence of 'traditionally' derived species boundaries through morphology and species limits inferred exclusively from the variation of DNA sequences. For that purpose, we sequenced two variable fragments of mitochondrial DNA (CO1 and 16S). Our analysis compares the number of recognized morphospecies with the putative species clusters obtained from mtDNA data through distance-based clustering (Meier et al., 2006), parsimony networks (Templeton, 2001) and the tree-based generalized mixed yule-coalescent approach (Pons et al., 2006; Fontaneto et al., 2007). The two latter methods are based on a phylogenetic species concept (which one exactly, see e.g. Wheeler and Meier, 2000, remains to be defined) and 'species boundaries' are derived from observed DNA sequence variation alone. Distance-based clustering, on the contrary, is connected to extrinsic determinations (e.g. morphological identifications and therefore a different species concept) in order to establish the respective best-fitting divergence threshold. It has its foundation in the practical criterion of finding a barcoding gap (the lack of overlap between intraspecific and interspecific molecular divergence) as an indicator of established species entities (Hebert et al., 2003a,b) and is computationally the simplest of the three methods. The general mixed Yule-coalescent (GMYC) model (Pons et al., 2006; Fontaneto et al., 2007) attempts to infer species boundaries as a shift in branching rates on a tree with multiple species and populations. Branching patterns within the species reflect neutral coalescent processes (Kingman, 1982), whereas branching among clusters reflects isolated lineage evolution (i.e. speciation; Yule, 1924). GMYC exploits the predicted difference in branching rate under the 2 modes of lineage evolution (coalescence vs. speciation), determining the point with the highest likelihood for the transition (Pons et al., 2006; Fontaneto et al., 2007). Thus, the goal is to recover independently evolving lineages as GMYC species clusters. These were subsequently tested for a gap between intraspecific and interspecific genetic distances in comparison to results based on established morphospecies. If we assume here that the mtDNA tree is congruent with the species tree and that GMYC species clusters represent 'perfect' phylopecies, we can test for the existence of an error-free barcoding gap in GMYC species. The tentative use of GMYC species clusters to detect a potential barcode gap is detached from prior taxonomic assignments and voucher identifications and lacking, excessive or incompletely sorted genetic divergence.

The existence of a 'barcoding gap' (Meyer and Paulay, 2005; Astrin et al., 2006; Dalebout et al., 2007; Wiemers and Fiedler, 2007; Lahaye et al., 2008; Meier et al., 2008; Kerr et al., 2009; Robinson et al., 2009) is crucial for successful species identification by DNA barcoding (e.g. Hebert et al., 2003a,b; Kerr et al., 2009). A key premise of DNA barcoding is that a gap between interspecific and intraspecific divergence can be used to identify unknown individuals (Hebert et al., 2003a,b). Typically, a threshold pairwise distance is defined based on a database or 'barcode library' (Hebert et al., 2004). Samples whose genetics distances are below the threshold are defined as conspecific (Hebert et al., 2003a, 2004; Blaxter, 2004; Lefebvre et al., 2006).

Several case studies have found such a gap in their dataset (e.g. Hogg and Hebert, 2004; Barrett and Hebert, 2005; Monaghan et al., 2005; Vences et al., 2005; Ward et al., 2005; Astrin et al., 2006; Hajibabaei et al., 2006; Huang et al., 2007; Mikkelsen et al., 2007; Eaton et al., 2010). However, the absence of a gap in other studies (e.g. Meyer and Paulay, 2005; Meier et al., 2006; Elias et al., 2007; Wiemers and Fiedler, 2007; Meier et al., 2008) have

led some authors to caution against the use of a simple distance threshold-oriented barcoding approach. So far it is unclear why some studies detect a barcoding gap while others do not (Wiemers and Fiedler, 2007). Meyer and Paulay (2005) assume that insufficient sampling on both the interspecific and intraspecific level are responsible for the barcoding gap, while others argue that the main reason for an overlap can be found in inappropriate assumptions underlying a sequence from the DNA library (i.e. poor identification, alpha-taxonomy or incompatible species criteria). Additional error sources can come from exceptionally high or low genetic variability (often based on population demography), incomplete lineage sorting (Zachos, 2009; but see Knowles and Carstens, 2007), hybridization after introgression events (Ballard and Whitlock, 2004; Mallet et al., 2007; Petit and Excoffier, 2009) and, in mitochondrial DNA, nuclear mitochondrial pseudogenes (numts; Bensasson et al., 2000; Pons and Vogler, 2005; Buhay, 2009), endosymbionts (Hurst and Jiggins, 2005; Weinert et al., 2007; Whitworth et al., 2007; Duron et al., 2008; Raychoudhury et al., 2009) or heteroplasmy (Matsuura et al. 1991; Magnacca and Brown, 2010).

## 2. Materials and methods

### 2.1. Specimen sampling and sequencing

We sampled multiple specimens for known morphospecies from as many localities as possible throughout Europe, focusing especially on southern and western Europe, where cryptorhynchine diversity is highest. Additionally, we collected very comprehensively on the Macaronesian islands (especially the Canary and Madeiran archipelagos) and North Africa (see map in Fig. 1).

In total, we analyzed sequences from 791 individuals belonging to 217 species and 25 genera (see Appendix 2) of Cryptorhynchinae. A proportion of 25% of the data have already been analyzed in previous studies with a different focus (see Appendix 1 for details). Since many species are extremely rare, many of these have been collected in small numbers. Species with wide or even pan-European distributions have been sampled from their entire range, as far as this was possible (see Fig. 2).

Two outgroup taxa were included in order to root the phylogenetic trees. Both belong to the same family as the ingroup (Curculionidae), but represent distinct subfamilies: *Coeliodes* sp., Ceutorhynchinae, and *Cionus* sp., Curculioninae.

Appendix 1 lists the collecting and vouchering information for the analyzed material as well as the corresponding GenBank accession numbers. Frozen voucher specimens in ethanol and extracted genomic DNA are deposited at the biobank of the ZFMK (Zoologisches Forschungsmuseum Alexander Koenig, Bonn, Germany).

We extracted DNA with the Nucleo Spin Tissue kit (Macherey-Nagel, Düren, Germany) from samples preserved in ethanol or from dried material. Therefore, we used either 2–3 legs, head and prothorax, or in some cases the whole weevil, depending on size and conservation of the sample. We amplified and sequenced two fragments of mitochondrial DNA. These included the 5' end of the cytochrome *c* oxidase subunit 1 gene (CO1; used in animal barcoding studies, cf. Hebert et al., 2003a,b) and part of the mitochondrial ribosomal large subunit or LSU gene (16S). PCR reaction mixes (50  $\mu$ l) contained 125 nmol MgCl<sub>2</sub>, 5  $\mu$ l 10x PCR-buffer, 25 pmol of forward and reverse primer each, 5 pmol dNTPs, 1.75 units of *Taq* polymerase, and 5  $\mu$ l total undiluted DNA template. The lab chemicals were purchased from Sigma-Aldrich (Steinheim, Germany). We used the Qiagen (Hilden, Germany) Multiplex PCR kit in cases where the regular protocol failed. PCR primers were taken from Astrin and Stüben (2008) (LCO1490-JJ-al from Astrin and Stüben, 2011). Primer sequences were as follows:

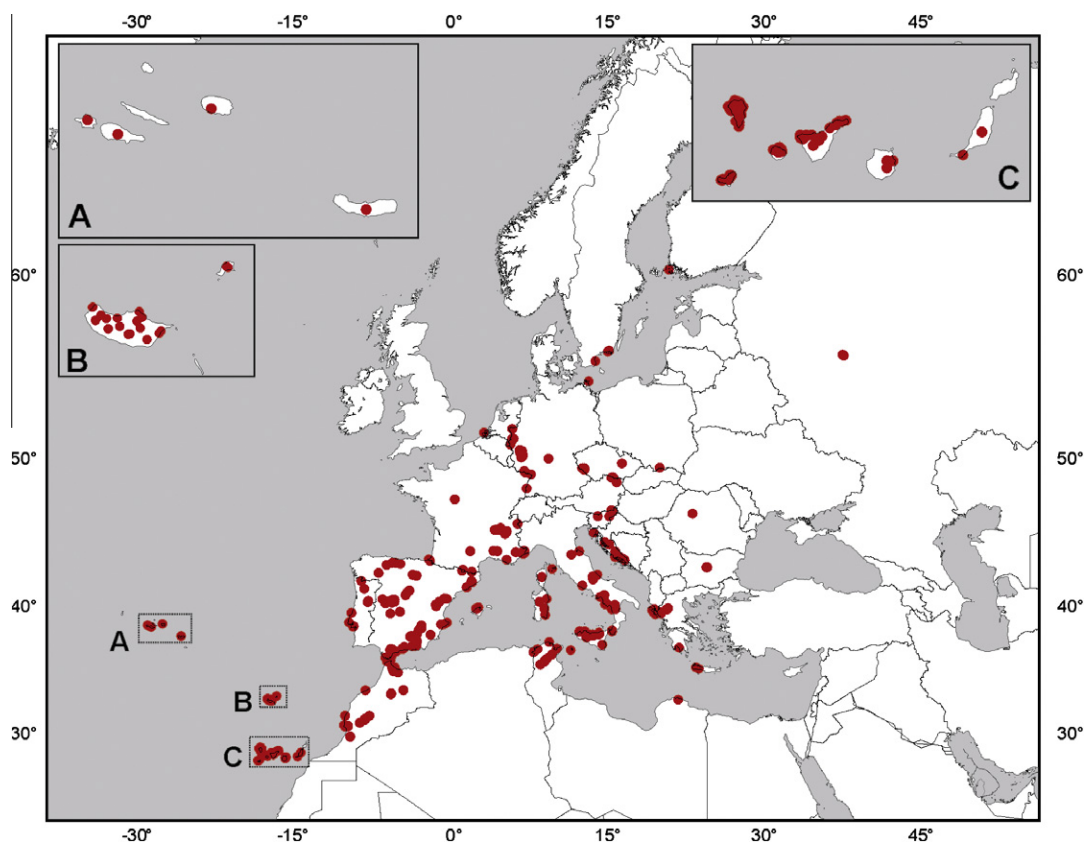


Fig. 1. Collecting. Collecting areas for this study are indicated as dots on the map.



Fig. 2. Individuals per species. Diagram showing the number of individuals (ordinate) sampled per species (abscissa). The mean number of represented individuals per species is 3.6.

LCO1490-JJ (CO1 forward, fw) 5'-CHACWAAYCATAAAGA TATYGG-3',  
 LCO1490-JJ-al (CO1 alternative fw, alt fw) 5'-TAYTCHACYAAYC AYAAAGAYATYGG-3',  
 HCO2198-JJ (CO1 reverse, rev) 5'-AWACTTCVGGRTGVCCAAA RAATCA-3',  
 16S-ar-JJ (16S fw, erroneously as "rev" in Astrin and Stüben 2008) 5'-CRCTGTTTATTAACAT-3',  
 16Sar-JJ-al (16S alt fw) 5'-CCTGTWTATTAACATGGC-3',  
 16S-1472-JJ (16S rev) 5'-AGATAGAAACCRACCTGG-3',  
 16S1472-JJ-al (alt rev) 5'-GGTCCTTCGTACTAA-3'.

Thermal cycling was performed on blocks of the type GeneAmp PCR System 2700 (Applied Biosystems, Foster City, CA, USA). PCR programs followed the 'Touch Down' routine or, in case of CO1, a combination of 'Touch Down' and 'Step Up' routine. For 16S: first

cycle set (15 repeats): 35 s denaturation at 94 °C, 35 s annealing at 55 °C (–1 °C per cycle) and 60 s extension at 72 °C. Second cycle set (25 repeats): 35 s denaturation at 94 °C, 35 s annealing at 40 °C and 50 s extension at 72 °C. For CO1: same as for 16S, but annealing temperatures at 70 °C and 55 °C, with a decrease of 2 °C per cycle in the first cycle set. Double stranded sequencing was carried out by a sequencing facility (Macrogen, Seoul, South Korea) on ABI 3730XL sequencers.

## 2.2. Alignment and data analysis

DNA sequence alignment for CO1 was performed using the MUSCLE ver. 3.6 programme (Edgar, 2004a,b), run with default parameters. The 16S alignment was run on the European Bioinformatics Institute web server (<http://www.ebi.ac.uk/Tools/msa/mafft/>) using MAFFT ver. 6.7 (Katoh et al., 2002; Katoh and Toh, 2008). The default MAFFT alignment parameters were used: gap opening and extension penalties at 1.53 and 0.123, respectively, the number of refinement iterations and progressive tree rebuilds set to maximum (at 100).

ModelTest ver. 3.7 (Posada and Crandall, 1998; Posada and Buckley, 2004), implementing the Bayesian (BIC; Schwarz, 1978) and standard AIC (Akaike, 1974) information criterion, identified the general time reversible (GTR; Lanave et al., 1984) + proportion of invariable sites (*I*) + gamma distribution (*Γ*) model of nucleotide substitution (or one of its subsets) as the most suitable model for both markers. We concatenated the sequence data from the different partitions using BioEdit ver. 7.0.4.1 (Hall, 1999) and filled up terminal gaps in slightly shorter sequences by the character N.

Pairwise genetic distances were calculated in PAUP\* ver. 4.0b10 (Swofford, 2002) and summarized for intra- and interspecific distances with PASW Statistics ver. 18 (SPSS).

Model-based phylogenetic analysis was performed on the complete dataset. Maximum Likelihood (ML; Felsenstein, 1973) searches were performed in PhyML ver. 2.4.4, (Guindon and Gascuel, 2003) and RAxML ver. 7.2.5 (Stamatakis et al., 2005). We also conducted a Bayesian analysis using parallel MrBayes ver. 3.1.2 (Ronquist and Huelsenbeck, 2003; Altekar et al., 2004), which we ran for 20 million generations. All reconstructions used a GTR + I +  $\Gamma$  model (as selected by ModelTest) and estimated the parameters directly from the data. Bayesian MCMC (Yang and Rannala, 1997) and RAxML analyses were performed with partitioned data (Brandley et al., 2005) and included 10,000 bootstrap replicates. Data were partitioned by separating the combined matrix into the two gene loci 16S and CO1, and further separating CO1 into one partition for codon positions 1 + 2 and another for codon position 3. Models were estimated for each partition. Tracer 1.4.1 (Rambaut and Drummond, 2007) was used to graphically determine stationarity and convergence of runs.

### 2.3. Grouping procedures and species delimitation

As a prior for species delimitation, sequence variation of specimens was subdivided into subgroups using statistical parsimony analysis (Templeton, 2001). This procedure partitions the data into networks of closely related haplotypes connected by changes that are non-homoplastic with a 95% probability. For mtDNA of insects, these networks usually group haplotypes around species-level (Templeton, 2001; Wilder and Hollocher, 2003; Cardoso and Vogler, 2005; Pons et al., 2006; Ahrens et al., 2007; Hendrich et al., 2010). Statistical parsimony networks were determined using TCS v.1.3 (Clement et al., 2000). Separate analyses were conducted on CO1 and 16S. A third analysis was conducted for both fragments in combination using only those individuals with both partitions.

We also used generalized mixed Yule-coalescent (GMYC) modeling for estimating species boundaries directly from the phylogenetic tree (Pons et al., 2006; Fontaneto et al., 2007), produced with the combined mitochondrial data and for each mitochondrial marker alone. This procedure exploits the differences in the rate of lineage branching at the level of species and populations, recognizable as a sudden increase of apparent diversification rate when ultrametric node height (distance to tips) is plotted against the log number of nodes in a lineage-through-time plot (Nee et al., 1992). We use here a single threshold value for our input tree (Monaghan et al., 2009) which has been already applied successfully to selected groups of organisms (Pons et al., 2006; Ahrens et al., 2007; Fontaneto et al., 2007; Monaghan et al., 2009). The script ('GMYC') of this method is freely available as part of the 'splits' package, which contains tools for delimiting species and automated taxonomy at many levels of biological organization (<https://www.r-forge.r-project.org/projects/splits/>), for the R environment (R Development Core Team, 2009). Subsequently we tested for the robustness of yields of species number estimates examining the alternative phylogenetic trees obtained from PhyML, RAxML and MrBayes searches and applying different algorithms to produce the GMYC input tree (i.e. the ultrametric tree) using non-parametric rate smoothing (NPRS; Sanderson, 1997), penalized likelihood as implemented in r8s ver. 1.7 (Sanderson, 2003) and a new algorithm, PATHd8 (Britton et al., 2007).

For the resulting clock-constrained input trees, relative ages of nodes were used. For the performance of penalized likelihood as implemented in r8s, trees were fully resolved in Tree Edit v1.0a10 (Rambaut and Charleston, 2001) using an arbitrary branch length of 0.000001 for polytomies. The root of the input tree was pruned and the ingroup root node set to 1. Since the cross validation in r8s was not feasible due to the large size of the tree, we applied a range of different smoothing factors for the lineariza-

tion of the tree. For one run of PATHd8 we also used absolute ages for nine nodes as calibrated in Stüben and Astrin (2010a).

To compare the efficiency of character-, tree- and distance-based approaches for taxon delineation, the SpeciesIdentifier program (Meier et al., 2006) from the TaxonDNA v.1.6.2 package (<http://taxondna.sourceforge.net/>) was used to compute, cluster and categorize pairwise uncorrected distances between sequences at user-predefined thresholds ("Cluster" function) based on valid taxonomic names in the sequence titles. SpeciesIdentifier groups all distances from a clique (where all individuals are connected to each other by distance values below the threshold) into a single cluster, as it does with quasi-cliques (where some individuals are connected to each other indirectly, i.e. some distances in the cluster infringe the threshold). Subsequently we determined the percentage of exact match between the resulting clusters and the morphospecies represented in the dataset.

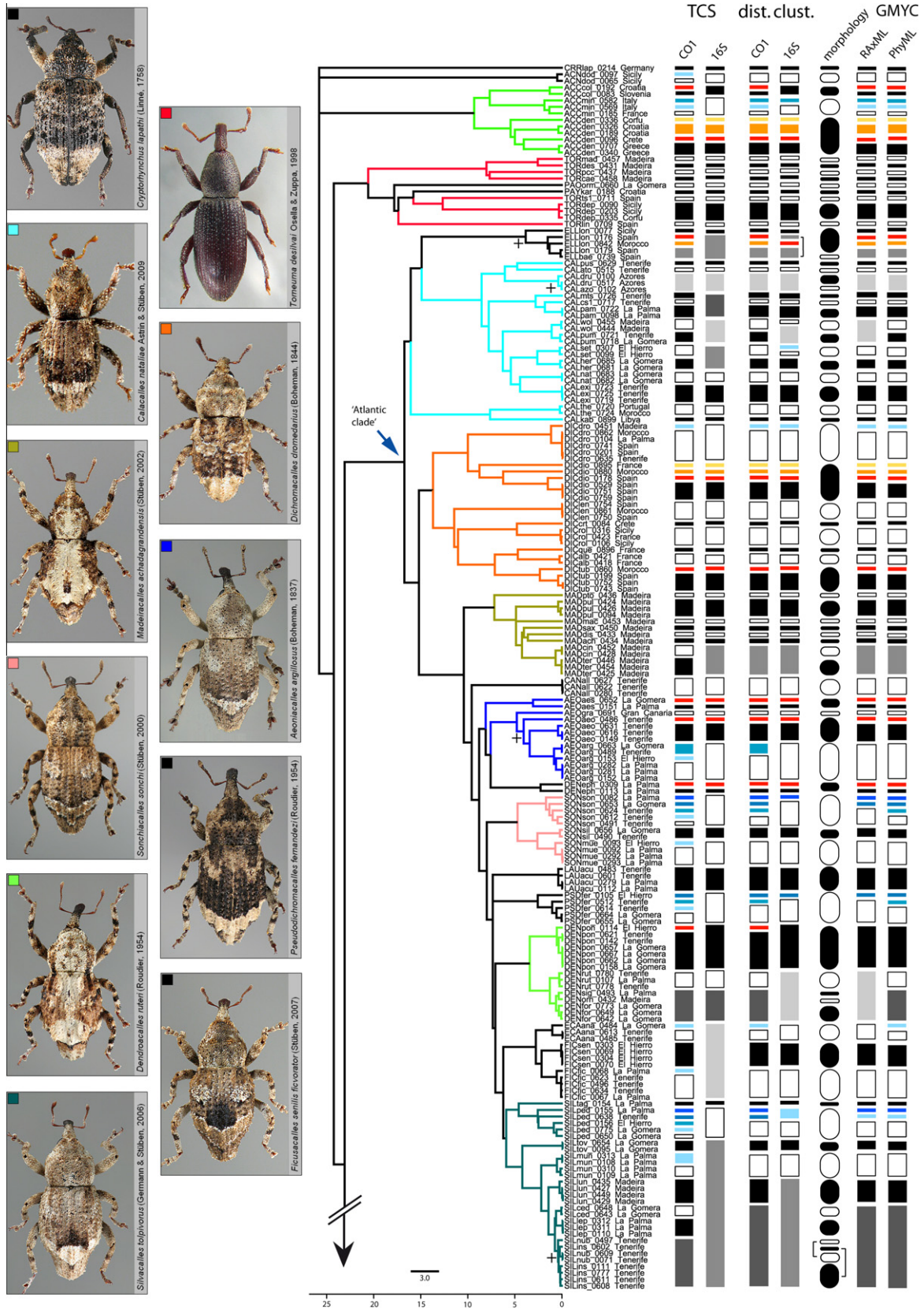
## 3. Results and discussion

We obtained 862 new mitochondrial sequences (452 sequences for 16S and 410 for CO1). We used another 645 sequences from Astrin and Stüben (2008, 2009, 2011) and Stüben and Astrin (2010a,b) (Appendix 1). Aligned sequence lengths were 658 base pairs (bp) for CO1 and 593 bp for 16S. Sequence length in the ribosomal large subunit gene varied because of insertions/deletions ('indels'; no gaps were present in the CO1 alignment). Thus, the longest sequence in 16S counted 544 bp, the shortest 529 bp (disregarding missing bases). The concatenated alignment of the combined markers was 1251 bp long. The median of sequence variation was 14.7% in 16S and 19.6% in CO1. Using PhyML with the mtDNA of the full dataset of 791 specimens we obtained a well resolved tree with a likelihood score of  $\ln L = -80348.26$ . Almost all genera were monophyletic (see Section 3.1.) and the tree topology was widely consistent with previous results (Astrin and Stüben, 2008, 2009, 2011; Stüben and Astrin, 2010a,b). Morphospecies (including 61 singletons in our dataset) were monophyletic in all but 19 cases for PhyML (marked by a "+" in Fig. 3). In MrBayes, 21 cases of non-monophyletic morphospecies occurred and in RAxML, 22 (see below). Morphospecies singletons all had unique haplotypes with only a few exceptions (five cases in 16S and four in CO1).

### 3.1. Tree topology and monophyly of taxa

The three different software programs used to infer phylogenetic relationships (MrBayes, PhyML, RAxML) delivered different topologies mainly at the deeper nodes of the tree. The relationships among the cryptorhynchine genera were not completely resolved, although an 'Atlantic clade' (Astrin and Stüben, 2008; see arrow on first page of Fig. 3) was always recovered as monophyletic with high support. Bootstrap, posterior probability and approximate likelihood ratio test (aLRT) values were in general low at nodes separating cryptorhynchine genera.

At 'intermediate' (within-genus) phylogenetic level, the markers show a better signal, which is reflected by high or maximal support values for clades that correspond to cryptorhynchine genera. Fig. 3 (corresponding to the PhyML reconstruction) shows all genera as monophyla with the following exceptions: *Acalles*, *Calacalles*, *Dendroacalles*, and *Torneuma*. *Acalles edoughensis* appears sister to *Montanacalles nevadaensis*. Consequently, it seems to be clearly (also morphologically) not a member of the genus *Acalles*. The genus *Elliptacalles* is nested within *Calacalles*, separating the continental and Macaronesian subgenera of *Calacalles*. This is not supported by any known synapomorphy in morphological characters. The clade of *Torneuma* includes the specimens of the genera *Paratorneuma* and *Paratyphloporus*. The position of *Dendroacalles euphorbiophilus*



**Fig. 3.** Group clusters as obtained through the different delineation methods are shown on the right side. Columns 1–2: TCS (CO1, 16S); columns 3–4: distance clustering with SpeciesIdentifier (CO1, 16S); column with rounded fields: according to morphology; last two columns: GMYC modeling (RaxML and PhyML, relative ages). Results are shown next to a mitochondrial PhyML tree that is based on taxa with no missing partition. Taxon names are abbreviated (abbreviations resolved in Appendix 1). No nodal support values are shown on the tree as proprietary values of the PhyML reconstruction would be misleading. Here, the focus lies on the synoptic comparison of various methods used for species delimitation. Branches within genera share the same color. These colors match those of the squares next to the genus representatives whose habitus (dorsal view) is depicted on the left side. The “+” signs mark cases of non-monophyly in species and subspecies taxa (here not included: cases with identical haplotypes or one partition missing, but see Section 3.1.).

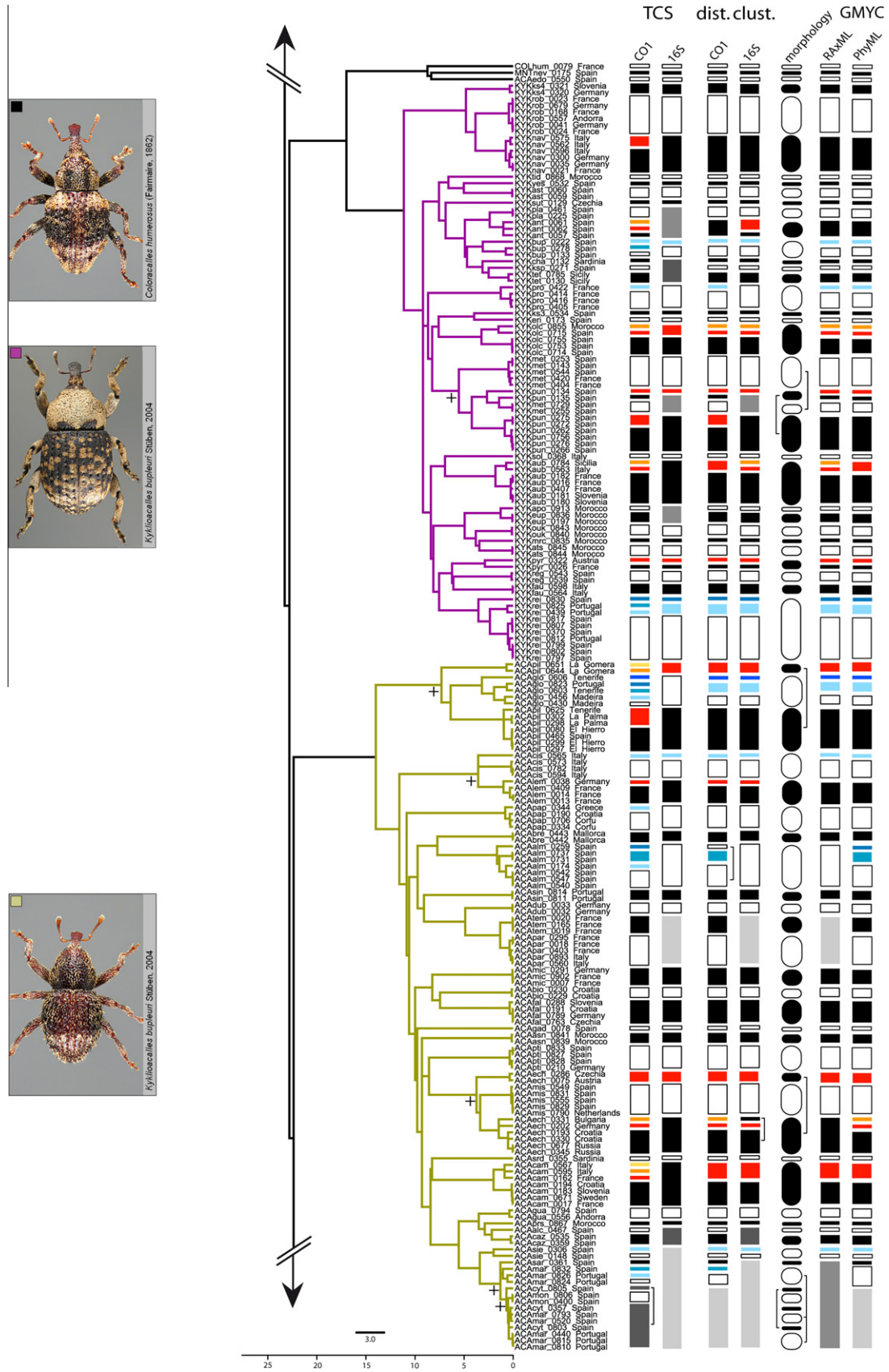


Fig. 3 (continued)

is a result of conflicting mitochondrial signal between the partitions (see Stüben and Astrin, 2010a).

All but 19 morphospecies were monophyletic in the PhyML tree (see “+” signs in Fig. 3). According to morphological evidence or,

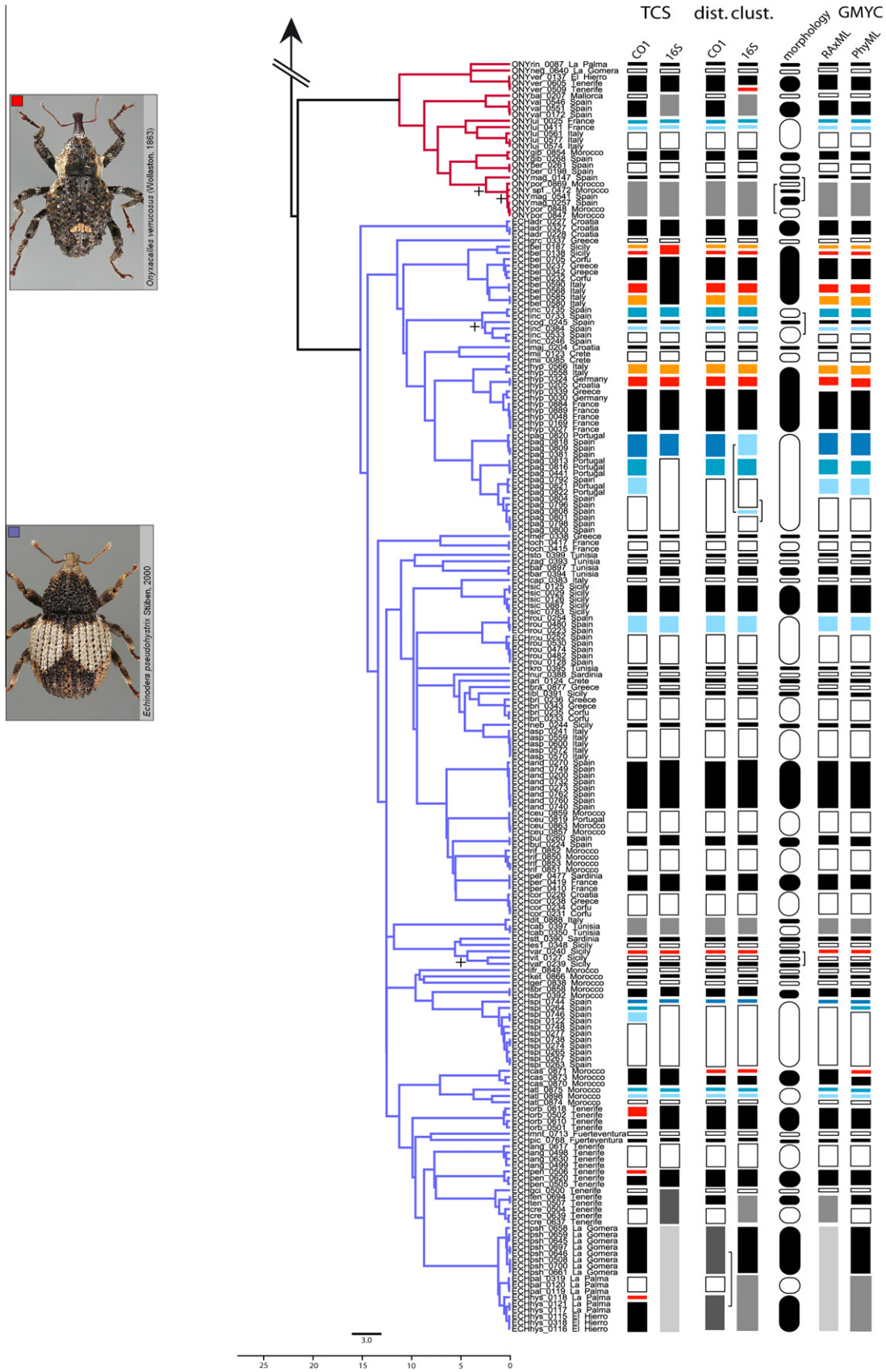


Fig. 3 (continued)

alternatively, according to ecological features, these cases can be grouped into two categories:

On one hand we have cases that find some correspondence in morphological or ecological evidence at a second inspection. Most

of these cases will be resolved by an updated classification: *Acallor-  
neuma doderoi* + *Acallor-  
neuma sabellai* (the latter not shown in the  
combined tree, as it lacks a CO1 sequence) appear together as one  
cluster of closely related species that lack reciprocal monophyly  
and so do *Calacalles azoricus* + *Calacalles droueti*, or *Madeiracalles  
terminalis* + *Madeiracalles tolpis* (the latter have identical haplo-  
types; as both mitochondrial partitions are identical, this case is  
not shown in Fig. 3, which excludes 100% identical sequences).  
*Acalles pilula* is not monophyletic and shows a deep genetic split  
between the sampled specimens. The same situation applies to  
*Acalles echinatus*, *Echinodera variegata*, and *Aeoniacalles aeonii*. The  
subspecies *Kykliocalles punctaticollis punctaticollis* and *Kykliocal-  
les punctaticollis meteoricus* probably hybridize where their distri-  
butions overlap (Stüben and Astrin, 2010b). *Dichromacalles  
querilhaci* was not monophyletic in the reconstructions that used  
also taxa with missing partitions.

On the other hand, we have cases that lack support from known  
morphological characters or existing ecological observations and  
that need to be investigated further. Some might be due to mis-  
identification of the samples, lab errors or misleading signal, as it  
is likely for *Silvacalles instabilis* + *Silvacalles nubilosus* (partly identi-  
cal haplotypes), *Dendroacalles ruteri* + *Dendroacalles fortunatus*  
(partly identical haplotypes) or, with regard to the potential new  
species, for *Onyxacalles portusveneris* + *Onyxacalles* sp. (partly identi-  
cal haplotypes) + *Onyxacalles maginaensis* (partly identical haplo-  
types). For other taxa, however, the possibility of synonymy has to  
be revisited by adding further morphological and/or molecular evi-  
dence: *Elliptacalles longus* + *Elliptacalles baeticus*, *Acalles maraoen-  
sis* + *Acalles monasterialis* (partly identical haplotypes) + *Acalles  
cytisi* + *Acalles sierrae* + *Acalles sarothamni*, and *Echinodera cog-  
nita* + *Echinodera incognita*.

### 3.2. Parsimony networks

Statistical parsimony analysis, conducted separately for 16S  
(477 haplotypes) and CO1 (570 haplotypes) and excluding the  
two outgroups, resulted in 214 and 301 networks, respectively  
(see Fig. 3). The connection limit (the minimum number of steps  
at which haplotypes are assigned to separate networks) was 10  
and 11 steps for 16S and CO1, respectively. Of the 214 16S net-  
works, 131 exclusively match a particular morphospecies, 60  
match only with a part of a morphospecies while 23 networks  
match with two or more morphospecies. Of the 301 CO1 networks,  
141 exclusively match a particular morphospecies, 152 networks  
match only with a part of a morphospecies and 8 match with more

than one morphospecies. The combined mitochondrial dataset  
contain 590 haplotypes and resulted in 295 parsimony networks.  
These are widely consistent with those of CO1 (Fig. 3). Under this  
character-based approach of species delineation the more con-  
served gene 16S has a much better match with the morphospecies  
so far recognized than CO1 (Table 1). Its match is even better than  
any of the tree- or distance-based approaches (Table 1). However,  
this best match of molecular and morphological species entities is  
still low (61.2%). This shows that ample conflict exists between the  
two kinds of data or their interpretations. A considerable part of  
this conflict can be solved when reassessing morphological evi-  
dence in the light of divergent molecular clusters, i.e. in a 'taxo-  
nomic feedback loop' (Page et al., 2005): in almost a third of  
these cases (in terms of clusters; this affects almost a fifth of all  
analyzed morphospecies; see Appendix 3), we found substantial  
new morphological evidence that supports the molecular findings.  
Most of the remaining cases cannot be solved without considering  
additional evidence.

### 3.3. Barcoding gap and cluster analysis by genetic distance

Statistically analyzing uncorrected (*p*-) distances within and be-  
tween valid morphospecies delivered very different results for  
each of the two mitochondrial markers used (see Table 3). How-  
ever, both markers (CO1, 16S) coincided in showing a wide overlap  
of inter- and intraspecific distances for morphologically delimited  
species. Both lack a barcoding gap when all observations are con-  
sidered: the smallest interspecific distances are always 0.0% (see  
Table 3). This compromises the direct use of distances in the pre-  
sent dataset for exact descriptive taxonomy (DNA taxonomy), e.g. in  
the hypothetical case that potentially new species should be added  
to see if all their pairwise distance comparisons fall into the 'inter-  
specific' range. However, DNA barcoding focuses on routine species  
reidentifications rather than species descriptions and therefore  
builds on already existing (more or less appropriate) taxonomies,  
thus making a low proportion of erroneous determinations accept-  
able, as they would incur in any other reidentification system.

Distance-based clustering in SpeciesIdentifier was performed  
with thirteen (0.5–12.0%) and eight (0.25–6.0%) different thresh-  
olds for CO1 and for 16S respectively (see Appendix 4). The highest  
taxonomic accuracy was achieved at a clustering threshold of 3%  
for CO1 and at 1% for 16S, yielding 260 and 233 species clusters  
respectively. Interestingly, a threshold of 3% in CO1 is often used  
as standard in insect barcoding. The match with morphospecies  
is similar for both genes (Table 1). CO1 shows a higher number

**Table 1**  
Comparison of results of the different DNA sequence-based species delineations (1) in terms of clusters, (2) regarding their match to morphospecies (lumps and splits are given as total or partial mismatches from morphospecies, i.e. not the 'raw' number of clusters in a split morphospecies nor the 'raw' number of morphospecies included in a lumped cluster), (3) Comparison of match between DNA-based clusters.

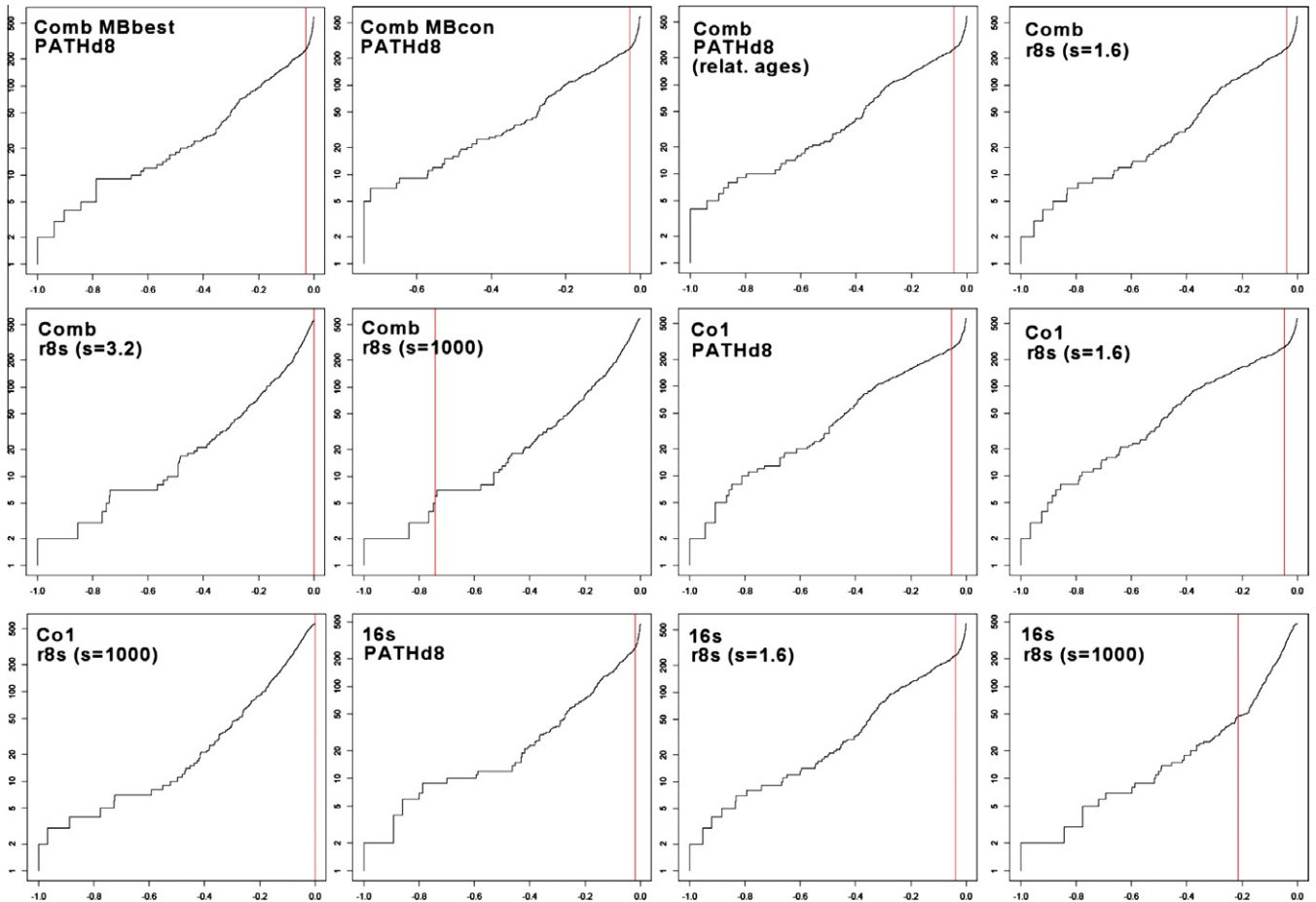
	Number of clusters	Splits vs. morphology	Lumps vs. morphol.	Match with morphol.	TCS CO1	TCS 16S	Distance clustering CO1	Distance clustering 16S	GMYC PhyML (rel. age)	GMYC RAXML	GMYC MrBayes (best)
TCS											
CO1	301	102	11	46.8	–	71.9	88.7	81.3	87.2	85.5	85.5
16S	214	37	39	61.2	71.9	–	78.7	83.7	81.2	85.3	80.3
Distance clustering											
CO1 (3%)	260	70	14	54.2	88.7	78.7	–	88.8	96.7	92.7	94.9
16S (1%)	233	58	21	54.1	81.3	83.7	88.8	–	90.5	93.6	91.0
GMYC											
CO1 individually	259	68	16	45.6							
16S individually	262	68	20	45.4							
PhyML (abs. age)	259	69	14	55.2							
PhyML (rel. age)	251	65	16	55.4	87.2	81.2	96.7	90.5	–	95.7	96.5
RAXML	244	60	10	56.1	85.5	85.3	92.7	93.6	95.7	–	94.7
MrBayes (best)	255	66	15	55.3	85.5	80.3	94.9	91.0	96.5	94.7	–
r8s (sf 1.6)	260	70	14	45.8							
NPRS (run 1)	265	76	16	49.4							



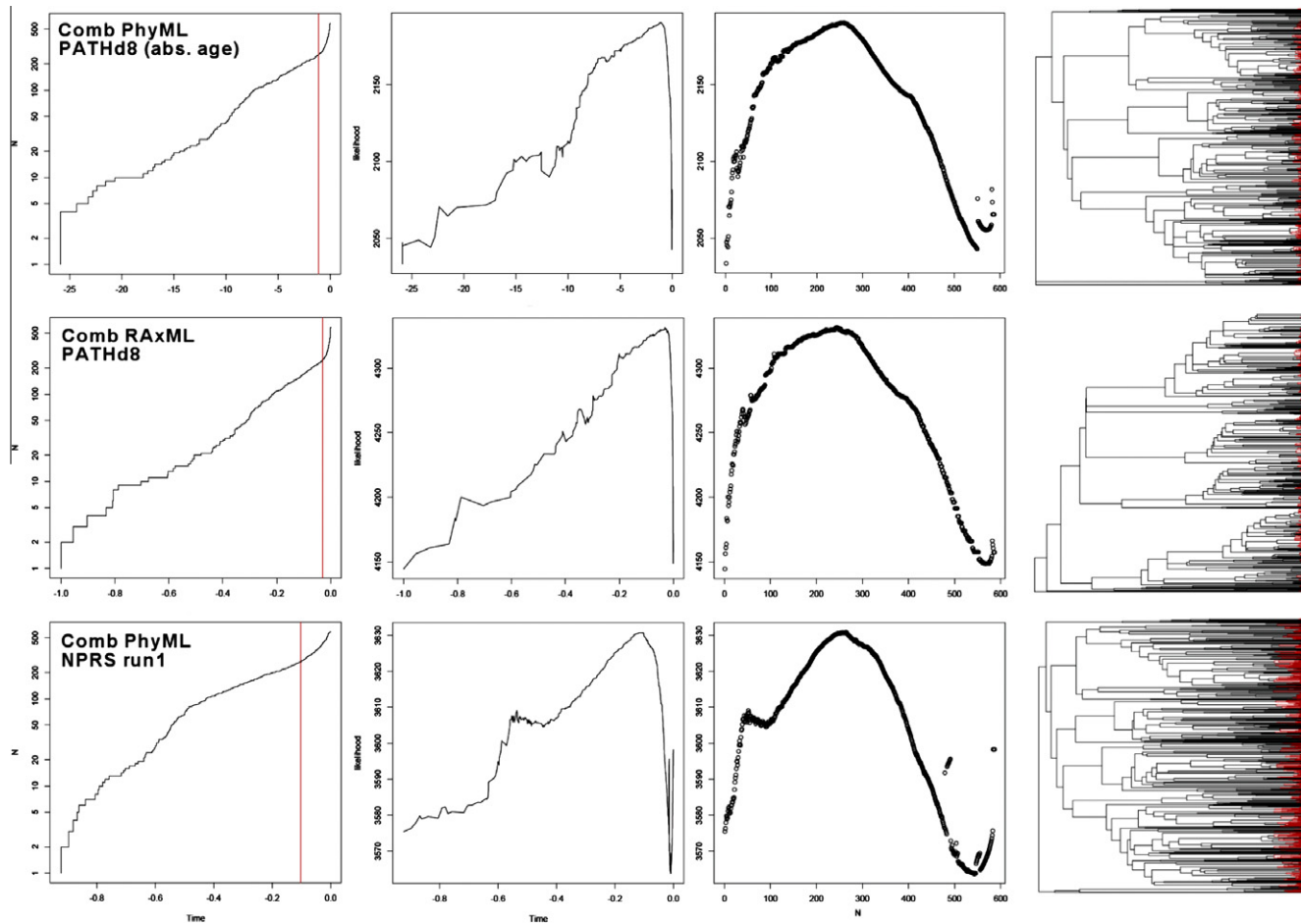
**Table 2**

GMYC clusters. The number of GMYC clusters ( $N_{GMYC}$ ) and confidence interval (CI) using single and combined partitions under different tree building and linearization methods and applying a single threshold model. Likelihood values are presented for null ( $L_0$ ) and GMYC ( $L_{GMYC}$ ) models. All datasets used relative ages for tree linearization (i.e. root = 1) except "abs. age"; NPRS run 1 ( $r_1$ ): weight rate differences across root; NPRS  $r_2$ : weight rate difference at root with mean; NPRS  $r_3$ : weight rate difference at all nodes with mean. Significance of the likelihood ratio (LR) was evaluated using a chi-square test with 3 degrees of freedom to compare GMYC and null models as implemented in the 'splits' software.  $p < 0.001$ ; sf: smoothing factor.

		$N_{GMYC}$	CI	$L_0$	$L_{GMYC}$	LR
PATHd8	PhyML					
	CO1	259	253–286	3657.893	3811.922	308.058*
	16S	262	247–271	3181.163	3265.288	168.251*
	Comb (abs. age) <sup>#</sup>	259	232–270	2033.526	2190.347	313.642*
	Comb (rel. age)	251	235–269	3942.55	4099.652	314.205*
	Comb RAxML	244	220–253	4144.41	4331.352	373.883*
	Comb Bayes best	255	223–268	4118.843	4224.582	211.479*
	Comb Bayes cons.	259	249–276	4113.923	4237.07	246.294*
r8s	Combined <sub>sf</sub> 1.6	260	247–270	3970.039	4112.05	284.022*
	Combined <sub>sf</sub> 3.2	564	563–571	4007.868	4058.439	101.142*
	Combined <sub>sf</sub> 1000	5	1–5	3953.012	3954.677	3.329
	CO1 <sub>sf</sub> 1	274	254–293	3623.752	3758.659	269.815*
	CO1 <sub>sf</sub> 1.6	274	255–294	3623.894	3758.565	269.340*
	CO1 <sub>sf</sub> 3.2	568	1–569	3759.041	3760.653	3.225
	CO1 <sub>sf</sub> 1000	568	7–569	3711.721	3715.593	7.744
	16S <sub>sf</sub> 1	241	233–250	3162.124	3221.268	118.288*
	16S <sub>sf</sub> 1.6	241	233–250	3162.228	3221.336	118.217*
	16S <sub>sf</sub> 3.2	241	233–250	3162.303	3221.411	118.217*
	16S <sub>sf</sub> 1000	47	37–56	3118.067	3127.057	17.980*
	NPRS	Combined $r_1$	265	227–279	3575.483	3630.816
Combined $r_2$		257	226–278	3581.74	3637.503	111.527
Combined $r_3$		265	236–281	3625.155	3714.957	179.603



**Fig. 4.** 'Species cut-off'. Tree linearization and resulting lineage through time (LTT) plot structure with resulting GMYC thresholds (vertical line).



**Fig. 5.** The effect of the tree shape (linearization; shown by a lineage through time plot; 1st graph from left) on the GMYC modeling performance with a single threshold model (shown by a likelihood-time plot (2nd graph from left) and the likelihood surface (3rd graph from left). Red branches indicate clades under coalescence in the species tree (right) (For interpretation of the references to color in this figure legend, the reader is referred to the web version of this article).

of additional splits, while the number of lumped clusters is greater in 16S.

### 3.4. GMYC clusters

For the tree-based estimation of species entities using GMYC modeling we pruned identical haplotypes from the dataset and again performed phylogenetic analyses on these data. In order to explore the robustness of the GMYC modeling results we used different tree search algorithms for this purpose as implemented in PhyML, RAxML, and MrBayes. Since the PhyML tree on combined mtDNA featured the highest number of monophyletic genera (for the dataset containing only taxa with both partitions), we use this tree to present the results of the group clusters that we obtained with the different approaches (Fig. 3).

Based on this PhyML tree, we explored the influence of the tree linearization on the output of the GMYC modeling. Therefore, we compared ultrametric input trees from NPRS, r8s using a set of various smoothing parameters, and PATHd8 (Table 2). Under the linearization using PATHd8 and NPRS, estimations of GMYC clusters for the combined dataset are quite similar. We found only slight alterations when absolute ages (from Stüben and Astrin, 2010a) were used to calibrate and linearize the tree. An interesting result is the sensitivity of GMYC clustering found with regard to suboptimal branch length estimation (e.g. incorrect smoothing parameters under penalized likelihood as implemented in r8s) (Fig. 4). This issue matters especially when cross validation cannot be performed

in order to identify optimal smoothing parameters, e.g. due to large size of the tree. Here, the overall tree shape is in some cases (e.g. smoothing parameter 3.2 or 1000 for CO1 and for the combined set or 100 for 16S) not any longer compensated by the program's algorithm (as it still was under the NPRS approach, see Fig. 5) and resulted in very unlikely species boundary estimations of 5, 47, or more than 500 GMYC species (see Table 2).

A standard log-likelihood ratio test as implemented in the GMYC software assessed whether the alternative model provides a significantly better fit than the null model of no such shift in branching process. Likelihood ratio (LR) values are not directly comparable between different data (i.e. branch lengths of different trees) because the input data (internode intervals) and thus the priors for the null model are different in each case. However, we could observe some general tendencies: the shape of the ultrametric input tree affects significantly the confidence of GMYC model estimates. In contrast to the rather similar GMYC cluster numbers and confidence intervals, we found for the LR much larger differences between the different methods of tree reconstruction and linearization, as has already been reported by Monaghan et al. (2009) for trees with clock-constraint, coalescent-relaxed clocks and Yule-relaxed clocks. In our data also penalized likelihood and nonparametric rate smoothing strongly alter the GMYC results. Interestingly, although under suboptimal smoothing parameters (r8s), LR turned to be significant for the combined data (under smoothing factor 3.2), although GMYC clusters were defined under this approach for almost each single terminal of the tree. Therefore,

**Table 3**

Intra- (A) and interspecific (B) pairwise distances [%] for morphospecies of Cryptorhynchinae. All distances are uncorrected (*p*-distances) except for “CO1 (K2P)”. Gaps were treated as missing data. For “16S no indels”, alignment positions with dubious homology (i.e. containing indels) were removed.

Morphospecies	CO1		CO1 (K2P)		16S		16S no indels		16S + CO1	
	A	B	A	B	A	B	A	B	A	B
Median	1.5	19.6	1.5	23.0	0.2	14.8	0.2	9.9	1.0	17.6
Minimum	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Maximum	18.7	28.0	21.9	35.3	6.8	24.3	5.7	19.5	13.4	24.6
95th percentile	9.4		10.1		3.7		2.6		6.9	
5th percentile		14.6		16.4		6.8		4.6		11.3

**Table 4**

Intra- (A) and interspecific (B) pairwise distances [%] for the GMYC species estimated from the PhyML tree linearized in PATHd8 (see PhyML boxes in Fig. 3.; legend: see Table 3).

GYMC species	CO1		CO1 (K2P)		16S		16S no indels		16S + CO1	
	A	B	A	B	A	B	A	B	A	B
Median	1.0	19.6	1.0	23.0	0.2	14.7	0.2	10.3	0.7	17.6
Minimum	0.0	2.0	0.0	2.0	0.0	0.2	0.0	0.0	0.0	1.8
Maximum	4.7	28.0	4.9	35.3	2.2	24.3	1.8	19.7	3.0	24.6
95th percentile	3.3		3.5		0.8		0.7		2.0	
5th percentile		14.5		16.4		6.7		4.6		11.2

LR and its significance need to be used cautiously to evaluate the reliability of the GMYC species estimate. The RAxML tree has the highest likelihood ratio (see Table 2 for a comparison of LR and other values). The match with morphospecies is also highest in the RAxML tree (see Table 1 for a comparison of matches between molecular methods and morphology).

### 3.5. Assessment of the barcoding gap under the assumption of GMYC species units

GMYC modeling delivers phylogenetically defined tentative species clusters under the assumption that the gene tree is congruent with the species tree. GMYC species units are decoupled from misidentifications and errors in taxonomy (arising from problems in morphology), and they ignore cases of incomplete lineage sorting or of lacking differentiation in genetic markers (compared to morphology). Consequently, several sources that potentially compromise the barcoding gap are excluded a priori (see above). For this reason, GMYC modeling represents a convenient test for the theoretical feasibility of the barcoding gap approach. Therefore, we analyzed pairwise genetic distances for GMYC species (estimated using the PATHd8-linearized PhyML tree) for the individual and combined markers (Table 4). Both markers (CO1, 16S) again show a clear overlap of inter- and intraspecific distances when all observations are considered: the smallest interspecific distance lies at 2% (CO1) and 0.2% (16S) in both cases, while the largest intraspecific distances are higher than 4% in both (Table 4). This provides a clear indication of failure of the barcoding gap. While the measures of central tendency for the distance data do not vary considerably between distance datasets with underlying morphospecies and with GMYC species, the extremes partially do (Tables 3 and 4).

## 4. Conclusion

In this study we have shown that different DNA analysis methods can yield a mix of both congruent and contrasting results to morphological analysis (Fig. 3, Appendix 3). Considering these results in combination with morphology will lead – in several cases – to an updated/revised alpha taxonomy of Cryptorhynchinae. This demonstrates the benefit that can result from using multiple data

sources and alternative statistical methods to obtain an idea about the reliability of the taxonomic signal.

Upcoming taxonomic work will focus in more detail on the cases of conflicting species delineations that have become apparent. As part of a taxonomic feedback loop, a first morphological reassessment already proved our dataset to include several cases with ‘inadequate’ taxonomy that are revealed through the application of molecular methods. This potentially affects almost a fifth of the analyzed species and could be the reason for a third of all cases of conflict with morphology (see Appendix 3). For example, all molecular analyses suggest *Aeoniacalles aeonisimilis* to be composed of two distinct species. Based on a re-examination of sequenced specimens and type material, new elytral characters have been found that allow also a distinction between two morphologically well defined forms. Consequently in this and other cases, new species are now being prepared for description. In other few cases, ecology proves that our molecular markers are not yet able to discern between young species from the Macaronesian islands, but that morphology can: *Madeiracalles cinereus*, highly specialized feeder on *Euphorbia mellifera*, is lumped by molecular methods (except TCS) into a single cluster with *M. terminalis*, which feeds in oligophagy on e.g. *Ficus* or *Spartocytisus*, but has never so far been found on *E. mellifera*. Other cases are due to misidentification of the samples (e.g. *Dendroacalles ruteri*), may be due to lab errors, or often cannot be resolved without consulting new evidence.

Our results of GMYC modeling show how the output from tree-based species delineation is affected by different competing model priors (i.e. branch length of ultrametric input trees), but that LR can be helpful to assess sensitivity and confidence of GMYC species estimates. When based on two genes instead of a single gene, coalescence-based methods of species delineation (GMYC) work better for our dataset.

Regarding the degree of match with the morphospecies so far defined in modern revisions, character-based delineation (TCS) was the most successful when applied to the more conservative ribosomal DNA marker (16S). The distance clustering results were similar to those of the best GMYC estimates (Table 1): a comparison of CO1 distance clustering and GMYC units (PhyML, relative ages) reveals that their entities differ in less than 4%.

GMYC modeling can be very helpful in descriptive taxonomy or in fast biodiversity assessments where taxa are poorly known, as it

provides us with species estimates based on molecular data alone. It offers independent evidence to revise morphology-based classification and to sort out uninformative ‘noise’ e.g. from morphometric data, which makes it a very valuable tool to integrative taxonomy. GMYC modeling can also provide confidence estimations. However, confidence intervals for the various results in this study vary depending on what kind of tree reconstruction, tree smoothing, etc. is used. Encompassing this uncertainty would make GMYC confidence statistics more meaningful.

Distance-based clustering is faster and easier to compute and its accuracy can be similar to GMYC clustering. This shows the potential of distance-based approaches for species reidentification, especially with very large datasets. However, it relies on external calibration (with e.g. morphospecies, see Meier et al., 2006; Hendrich et al., 2010) to be meaningful. It does therefore not provide independent hypotheses of species limits. Nevertheless, there was a surprising correspondence between the results of GMYC modeling and distance clustering when applying standard divergence thresholds for the latter (Table 1). Thus, distance approaches can deliver fast, helpful clues for integrative taxonomy.

The lack of a clear barcoding gap even with GMYC units is here not only a result of inadequate species taxonomy, incomplete lineage sorting or lacking divergence (in young species), but must also be attributed to the (uneven) branching structure of the tree (i.e. the idiosyncratic sequence evolution). It needs to be further investigated, possibly with simulations, if this is due to naturally different rates of sequence evolution (e.g. because of different dispersal activity; Papadopoulou et al., 2008, 2009) and speciation rates or rather (or also) originates from a sampling bias (Lohse, 2009).

The low match we found between different species delineations and morphospecies might partially have causes in the different species concepts used to define species. However, it also shows how necessary it is to combine the output of various methods in an integrative approach. Only in doing so we obtain an idea about the reliability of the different results (species limits) and about signals. This enables us to fine-tune sampling, delineation methods and data collection (markers), and to identify species that require taxonomic revision.

## Acknowledgments

This work was supported by the Deutsche Forschungsgemeinschaft (Grant WA 530/36-1) and the Alexander Koenig Stiftung. We want to thank two anonymous referees for their helpful comments that greatly aided in improving the manuscript, C. Blume and C. Eitzbauer for help in the lab and our colleagues at the ZFMK molecular lab for advice and discussions. Many thanks to the collectors who contributed material to this study (see Appendix 1).

## Appendix A. Supplementary data

Supplementary data associated with this article can be found, in the online version, at doi:10.1016/j.ympev.2011.11.018.

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**Electronic Supplement** to "Exploring diversity in cryptorhynchine weevils (Coleoptera) using distance-, character- and tree-based species delineation" by Jonas Astrin; Peter Stüben; Bernhard Misof; Wolfgang Wägele; France Gimnich; Michael Raupach; Dirk Ahrens

## Appendix 1

Collecting data, vouchers and GenBank accession numbers. Collecting data usually consist of country, locality incl. coordinates, host plant, year of collection and the collector's name(s). All specimens determined by P. E. Stüben, 2006-2009. Vouchers (DNA, tissue/morphology) are kept at the biobank of the Zoologisches Forschungsmuseum Alexander Koenig (ZFMK). Provenience of the sequences: GenBank accession numbers GU987139-GU988609 were sequenced in this study (also GU213772-GU213779); sequences starting with "**EU-**" are from Astrin and Stüben, 2008; "**FJ-**": Stüben and Astrin, 2010a; "**GQ-**": Astrin and Stüben, 2009; "**GU-**" inferior to GU213772: Astrin and Stüben, 2011. Sequences GU981469-GU981566 are from Stüben and Astrin, 2010b; cases of missing partitions are marked by a line. Accession number on top: 16S; bottom: CO1

Acalles alcarazensis Stüben 2009; ACAal	SPAIN: Andalucía, S. de Segura, 16 km NE Tranco, "Mt. Yelmo"; N38°15'16" W02°39'23", 1776m; Erinacea anthyllis, Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0353, ZFMK-TIS-cE458	GU988302 _____
Acalles alcarazensis Stüben 2009; ACAal	SPAIN: Castilla-La Mancha, S. de Alcaraz, 12 km SE Alcaraz, near Mt. Almenara; N38°34'17" W02°25'53", 1650m; Amelanchier ovalis, Acer, 2003, Stüben	ZFMK-DNA-JJ0518, ZFMK-TIS-cE579	GU988380 GU987941
Acalles alcarazensis Stüben 2009; ACAal	SPAIN: Castilla-La Mancha, S. de Alcaraz, 12 km SE Alcaraz, near Mt. Almenara; N38°34'17" W02°25'53", 1650m; Amelanchier ovalis, Acer, 2003, Stüben	ZFMK-DNA-JJ0519, ZFMK-TIS-cE580	GU988381 GU987942
Acalles alcarazensis Stüben 2009; ACAal	SPAIN: Castilla-La Mancha, Sierra de Alcaraz, 12 km SE Alcaraz, near Mt. Almenara; N38°34'17" W02°25'53", 1650m; Amelanchier ovalis, Acer, 2003, Stüben	ZFMK-DNA-JJ0467, ZFMK-TIS-cE457	GU988349 GU987921
Acalles alcarazensis Stüben 2009; ACAal	SPAIN: Castilla-La Mancha, Sierra de Alcaraz, 12 km SE Alcaraz, nr. Mt. Almenara; N38°34'17" W02°25'53", 1650m; Amelanchier ovalis, Acer, 2003, Stüben	ZFMK-DNA-JJ0352, ZFMK-TIS-cE457	GU988301 _____
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Castellón, Morella, Barranco de la Bota; N40°33'12" W00°00'27", 814m; Quercus ilex, Hedera helix, 2008	ZFMK-DNA-JJ0547, ZFMK-TIS-cE608	GU988394 GU987954
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Teruel, near Mora de Rubielos; N40°19'08" W00°43'19", 1369m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0542, ZFMK-TIS-cE603	GU988391 GU987951
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Teruel, S. Javalambre, Fuente la Risca near Arcos de las Salinas; N39°59'56" W01°01'21", 1121m; Amelanchier ovalis, Acer monspessulanum, Erinacea anthyllis, Ulex, 2008	ZFMK-DNA-JJ0540, ZFMK-TIS-cE601	GU988389 GU987949
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Almería, 11 km NW Laujar de Andarax, Sierra Nevada, Bayárcal; N37°02'27" W03°00'12", 1291m; Quercus ilex, broom, Euphorbia, 2007	ZFMK-DNA-JJ0174, ZFMK-TIS-cE0186	EU286333 EU286497
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Granada, 5 km N Laujar de Andarax, Sierra Nevada, N37°02'16" W02°54'51", 1597m; Erinacea anthyllis, 2007	ZFMK-DNA-JJ0259, ZFMK-TIS-cE0192	GU988242 GU987825
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Málaga, NE Málaga, Sierra de Tejeda, Alcaucin; N36°54'54" W04°05'27", 751m; Viburnum tinus, 2009, Stüben	ZFMK-DNA-JJ0737, ZFMK-TIS-cE759	GU988498 GU988058
Acalles almeriaensis Stüben 2001; ACAalm	SPAIN: Málaga, NE Málaga, Sierra de Tejeda, Alcaucin; N36°56'13" W04°04'59", 1020m; Quercus ilex, 2009, Stüben	ZFMK-DNA-JJ0731, ZFMK-TIS-cE760	GU988494 GU988054
Acalles asniensis Stüben 2003; ACAasn	MOROCCO: High Atlas, E Asni, Oukaimeden; N31°12'14" W07°52'21", 2646m; Erinacea, 2009, Stüben	ZFMK-DNA-JJ0839, ZFMK-TIS-cE882	GU988569 GU988129
Acalles asniensis Stüben 2003; ACAasn	MOROCCO: High Atlas, SE Asni, Tacheddirt (near Imllil); N31°09'07" W07°50'18", 2420m; broom, Daphne, 2009, Stüben	ZFMK-DNA-JJ0841, ZFMK-TIS-cE884	GU988570 GU988130

Acalles biokovoensis Stüben 2008; ACABio	CROATIA: Dalmatien, 3 km NE Makarska, Biokovo Mts., "Vosac"; N43°18'53" E17°03'09", 1367m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0229, ZFMK-TIS-cHR0330	GU988236 GU987819
Acalles biokovoensis Stüben 2008; ACABio	CROATIA: Dalmatien, 4 km E Makarska, Biokovo Mts., "Mt. Sinjal"; N43°18'39" E17°03'49", 1320m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0230, ZFMK-TIS-cHR0341	GU988237 GU987820
Acalles breiti Solari 1908; ACAbre	SPAIN: Mallorca; N39°48'59" E02°49'26"; Quercus ilex, 2007	ZFMK-DNA-JJ0442, ZFMK-TIS-cE542	GU988339 GU987911
Acalles breiti Solari 1908; ACAbre	SPAIN: Mallorca; N39°51'04" E02°48'23"; Quercus ilex, 2007	ZFMK-DNA-JJ0443, ZFMK-TIS-cE543	GU988340 GU987912
Acalles camelus (Fabricius 1792); ACAcam	GERMANY: Rügen, Sassnitz, near Rusewase; N54°32'29" E13°37'46", 144m; Fagus, 2008	ZFMK-DNA-JJ0675, ZFMK-TIS-cD666	GU988469 GU988032
Acalles camelus (Fabricius 1792); ACAcam	SWEDEN: Simrishamn, Stenshuvud N.P.; N55°39'15" E14°15'50", 80m, 2008	ZFMK-DNA-JJ0671, ZFMK-TIS-cS662	GU988465 GU988028
Acalles camelus (Fabricius 1792); ACAcam	FRANCE: Isère, 14 km N Grenoble, Massif de la Chartreus, NW Col de Porte; N45°18'40" E05°45'17", 1649m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0045, ZFMK-TIS-cl0034	GU988186 GU987776
Acalles camelus (Fabricius 1792); ACAcam	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0017, ZFMK-TIS-cl0026	EU286282 EU286447
Acalles camelus (Fabricius 1792); ACAcam	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0162, ZFMK-TIS-cl0016	GU988224 GU987808
Acalles camelus (Fabricius 1792); ACAcam	CROATIA: Dalmatien, 8 km E Karlobag, Velebit Mts., Stupacinovo; N44°32'41" E15°09'58", 1049m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0194, ZFMK-TIS-cHR0336	EU286347 EU286511
Acalles camelus (Fabricius 1792); ACAcam	ITALY: Abruzzo, P.N. Majella, 11 km N Roccaraso, Bosco di S. Antonio; N41°56'27" E14°01'41", 1321m; Pyrus/Acer, 2008, Stüben	ZFMK-DNA-JJ0595, ZFMK-TIS-cl656	GU988427 GU987989
Acalles camelus (Fabricius 1792); ACAcam	ITALY: Basilicata, Monte Pollino, 9 km SE Rotonda, Rif. de Gasperi; N39°54'37" E16°07'15", 1486m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0576, ZFMK-TIS-cl637	GU987978
Acalles camelus (Fabricius 1792); ACAcam	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0567, ZFMK-TIS-cl628	GU988411 GU987971
Acalles camelus (Fabricius 1792); ACAcam	AUSTRIA: Niederösterreich, Merkersdorf, National Park Thayatal; Carpinetum, 2006, Stejskal	ZFMK-DNA-JJ0184, ZFMK-TIS-cA0228	GU988230 GU987814
Acalles camelus (Fabricius 1792); ACAcam	SLOVENIA: Apasko Polje, Podgorje, Podgorje env., 30 km NE of Maribor; Quercus, Carpinus, 2006, Stejskal	ZFMK-DNA-JJ0183, ZFMK-TIS-cSLO0227	GU988229 GU987813
Acalles camelus (Fabricius 1792); ACAcam	SLOVENIA: Drava Valley, Cresnjevec, Cresnjevec env., 22 km W of Maribor; Fagus, Acer, Abies, 2006, Stejskal	ZFMK-DNA-JJ0284, ZFMK-TIS-cSLO0229	GU988259 GU987842
Acalles cazorlaensis Stüben 2004; ACAcaz	SPAIN: Jaén, Cazorla, El Chorro; N37°50'25" W02°59'24", 1559m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0535, ZFMK-TIS-cE596	GU988386 GU987946
Acalles cazorlaensis Stüben 2004; ACAcaz	SPAIN: Jaén, Cazorla, near El Chorro; N37°50'52" W02°57'34", 1610m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0538, ZFMK-TIS-cE599	GU988388 GU987948
Acalles cazorlaensis Stüben 2004; ACAcaz	SPAIN: Andalucía, Sierra de Segura (Sierra de Pozo), 12 km SE Cazorla; N37°52'53" W02°52'39", 1300m; Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0359, ZFMK-TIS-cE464	GU988305 GU987884
Acalles cytisi Stüben 2004; ACAcyt	SPAIN: Ávila, E Béjar, S La Hoya, La Covatilla; N40°21'26" W05°41'06", 1950m; Cytisus, 2009	ZFMK-DNA-JJ0805, ZFMK-TIS-cE847	GU988544 GU988105
Acalles cytisi Stüben 2004; ACAcyt	SPAIN: Ávila, NW Arenas de San Pedro, Gredos NP, "la plataforma"; N40°16'06" W05°14'22", 1880m; Cytisus spp., 2009	ZFMK-DNA-JJ0803, ZFMK-TIS-cE845	GU988543 GU988104
Acalles cytisi Stüben 2004; ACAcyt	SPAIN: Cáceres, 28 km N Plasencia, Montes de Tras la Sierra, Puerto de Honduras; N40°13'58" W05°53'02", 1273m; Cytisus, 2004, Stüben	ZFMK-DNA-JJ0357, ZFMK-TIS-cE462	GU988304 GU987883
Acalles dubius A. & F. Solari 1907; ACAdub	GERMANY: Rheinland-Pfalz, Bausenberg bei Niederzissen; N50°27'52" E07°13'29", 291m; Quercus, Carpinus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0033, ZFMK-TIS-cM0066	EU286288 EU286453
Acalles dubius A. & F. Solari 1907; ACAdub	GERMANY: Rheinland-Pfalz, Bausenberg, Niederzissen; N50°27'52" E07°13'29", 291m; Quercus, Carpinus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0032, ZFMK-TIS-cM0066	GU988177 GU987767
Acalles dubius A. & F. Solari 1907; ACAdub	GERMANY: Baden-W., Kaiserstuhl, Auf dem Eck; N48°06'32" E07°40'04", 432m; Fagus, Carpinus, Quercus, 2006, Stüben	ZFMK-DNA-JJ0160, ZFMK-TIS-cD0094	GU987806
Acalles dubius A. & F. Solari 1907; ACAdub	GERMANY: Rheinl.-Pfalz, Kaltenborn, Hohe Acht; N50°23'08" E07°01'25", 605m; Quercus, Fagus, 2007, Stüben	ZFMK-DNA-JJ0347, ZFMK-TIS-cD0423	GU988298 GU987881
Acalles echinatus (Germar 1824); ACAech	BULGARIA: W Gabrovo, Aprilci, 2007, Bialooki	ZFMK-DNA-JJ0331, ZFMK-TIS-cBUL0344	GU988288 GU987871
Acalles echinatus (Germar 1824); ACAech	BULGARIA: W Gabrovo, Stokite, 2007, Bialooki	ZFMK-DNA-JJ0332, ZFMK-TIS-cBUL0345	GU988289 GU987872



Acalles echinatus (Germar 1824); ACAeCh	RUSSIA: Ivanteevka, near Moscow; N55°59'14" E37°58'37", 138m; Quercus, Fagus, Corylus, 2007	ZFMK-DNA-JJ0345, ZFMK-TIS-cRU0410	GU988296 GU987879
Acalles echinatus (Germar 1824); ACAeCh	RUSSIA: Moskow, Fryazino, Grebnevo; N55°57'01" E38°05'05", 160m; Betula, Tilia, 2008	ZFMK-DNA-JJ0678, ZFMK-TIS-cR669	GU988471 GU988034
Acalles echinatus (Germar 1824); ACAeCh	RUSSIA: Moskow, near Ivanteevka; N55°59'18" E37°59'00", 170m, 2008	ZFMK-DNA-JJ0677, ZFMK-TIS-cR668	GU988470 GU988033
Acalles echinatus (Germar 1824); ACAeCh	CROATIA: Dalmatien, 6 km E Karlobag, Velebit Mts., Ostarijska vrata; N44°31'45" E15°08'34", 927m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0193, ZFMK-TIS-cHR0334	EU286346 EU286510
Acalles echinatus (Germar 1824); ACAeCh	CROATIA: Dalmatien, 8 km E Karlobag, Velebit Mts., Stupacinovo; N44°32'41" E15°09'58", 1049m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0330, ZFMK-TIS-cHR0338	GU988287 GU987870
Acalles echinatus (Germar 1824); ACAeCh	GERMANY: Bayern, N Karlstadt, Gambach, NSG Grainberg-Kalbenstein; N49°59'28" E09°45'45", 260m; Fagus, 2006, Stüben	ZFMK-DNA-JJ0202, ZFMK-TIS-cD0234	GU988232 GU987816
Acalles echinatus (Germar 1824); ACAeCh	AUSTRIA: Niederösterreich, Merkersdorf, National Park Thayatal; Carpinetum, 2006, Stejskal	ZFMK-DNA-JJ0075, ZFMK-TIS-cA0093	GU988200 GU987786
Acalles echinatus (Germar 1824); ACAeCh	CZECH REPUBLIC: Moravia mer., Pavlov env, Pálava Protected Landscape Area; Tilia, Carpinus, Quercus, 2006, Stejskal	ZFMK-DNA-JJ0286, ZFMK-TIS-cCZ0231	GU988260 GU987843
Acalles echinatus (Germar 1824); ACAeCh	FINLAND: Iniö Salmis; 5-10m, 2006, Clayhills	ZFMK-DNA-JJ0209, ZFMK-TIS-cFIN0232	EU286358
Acalles edoughensis Desbrochers 1892; ACAeCh	SPAIN: Barcelona, above dry river bed, near Vallirana; N41°22'36" E01°55'02", 245m; Quercus ilex, Ficus carica, Smilax aspera, 2008	ZFMK-DNA-JJ0550, ZFMK-TIS-cE611	GU988397 GU987957
Acalles edoughensis Desbrochers 1892; ACAeCh	SPAIN: Barcelona, above dry river bed, near Vallirana; N41°22'36" E01°55'02", 245m; Quercus ilex, Ficus carica, Smilax aspera, 2008	ZFMK-DNA-JJ0881, ZFMK-TIS-cE611	GU988591 GU988150
Acalles fallax Boheman 1844; ACAfal	CZECH REPUBLIC: W Bohemia (KT), Klenová (6645), 2008, Kresl	ZFMK-DNA-JJ0763, ZFMK-TIS-cCz797	GU988518 GU988078
Acalles fallax Boheman 1844; ACAfal	CROATIA: Dalmatien, 22 km SE Gospic, Velebit Mts., Medak; N44°24'32" E15°34'13", 617m; Quercus, 2007, Stüben	ZFMK-DNA-JJ0191, ZFMK-TIS-cHR0332	EU286344 EU286508
Acalles fallax Boheman 1844; ACAfal	GERMANY: NRW, N Aachen, S. Herzogenrath; N50°51'25" E06°05'44", 262m, 2009, Stüben	ZFMK-DNA-JJ0789, ZFMK-TIS-cD831	GU988532 GU988093
Acalles fallax Boheman 1844; ACAfal	SLOVENIA: Apasko Polje, Podgorje, Podgorje env., 30 km NE of Maribor; Quercus, Carpinus, 2006, Stejskal	ZFMK-DNA-JJ0289, ZFMK-TIS-cSLO0236	GU988262
Acalles fallax Boheman 1844; ACAfal	SLOVENIA: Drava Valley, Cresnjevec env., 22 km W of Maribor; Fagus, Acer, Abies, 2006, Stejskal	ZFMK-DNA-JJ0288, ZFMK-TIS-cSLO0235	GU988261 GU987844
Acalles fallax Boheman 1844; ACAfal	SLOVENIA: Sv. Ana, env., 20 km NE of Maribor; Fagus, Quercus, 2006, Stejskal	ZFMK-DNA-JJ0076, ZFMK-TIS-cSLO0095	GU988201
Acalles gadorensis Stüben 2001; ACAgad	SPAIN: Murcia, 13 km N Totana, Sierra de Espuna; N37°52'07" W01°33'46", 1361m; Erinacea anthyllis, Quercus ilex under Pinus, 2005, Stüben	ZFMK-DNA-JJ0078, ZFMK-TIS-cE0097	EU286294 EU286459
Acalles globulipennis Wollaston 1854; ACAglo	PORTUGAL: N Caldas da Rainha., SW Nazaré, near São Martinho do Porto; N39°30'23" W09°09'16", 53m; Pistacia lentiscus, 2009	ZFMK-DNA-JJ0823, ZFMK-TIS-cE866	GU988556 GU988117
Acalles globulipennis Wollaston 1854; ACAglo	PORTUGAL: Madeira, 3 km W Porto Moniz, Santa Madalena; N32°51'31" W17°12'11", 391m; Ficus carica, 2008	ZFMK-DNA-JJ0456, ZFMK-TIS-cP521	GU988346 GU987919
Acalles globulipennis Wollaston 1854; ACAglo	PORTUGAL: Madeira, 4,5 km S São VicentBoca da Encumeada, "Folhadal"; N32°45'08" W17°01'40", 1004m; Laurissilva, Euphorbia mellifera, 2008	ZFMK-DNA-JJ0430, ZFMK-TIS-cP528	FJ716495 FJ716546
Acalles globulipennis Wollaston 1854; ACAglo	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0606, ZFMK-TIS-cE679	GU988435 GU987997
Acalles globulipennis Wollaston 1854; ACAglo	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Moquinal; N28°31'55" W16°17'24", 840m; laurissilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0603, ZFMK-TIS-cE676	FJ716513 FJ716562
Acalles guadarramaensis Stüben 2004; ACAgua	ANDORRA: near El Serrat; N42°37'38" E01°33'07", 1800m; Corylus avellana, Betula, 2008	ZFMK-DNA-JJ0556, ZFMK-TIS-cAND617	GU988403 GU987963
Acalles guadarramaensis Stüben 2004; ACAgua	SPAIN: Madrid, N Somosierra, Pto. de Somosierra; N41°08'39" W03°34'41", 1380m; Cytisus spp., Ilex, Salix, 2009	ZFMK-DNA-JJ0794, ZFMK-TIS-cE836	GU988535 GU988096
Acalles lemur cisalpinus Stüben 2003; ACAcis	ITALY: Lazio, Monti Lepini, Prati, 2007, Brandstetter	ZFMK-DNA-JJ0782, ZFMK-TIS-cl824	GU988529 GU988090
Acalles lemur cisalpinus Stüben 2003; ACAcis	ITALY: Abruzzo, P.N. Majella, 11 km N Roccaraso, Bosco di S. Antonio; N41°56'27" E14°01'41", 1321m; Pyrus/Acer, 2008, Stüben	ZFMK-DNA-JJ0594, ZFMK-TIS-cl655	GU988426 GU987988
Acalles lemur cisalpinus Stüben 2003; ACAcis	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0565, ZFMK-TIS-cl626	GU988410 GU987970
Acalles lemur cisalpinus Stüben 2003; ACAcis	ITALY: Campania, Monti Picentini, 9 km N Acerno, Piano Laceno; N40°48'58" E15°07'35", 1210m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0573, ZFMK-TIS-cl634	GU988416 GU987976

Acalles lemur lemur (Germar 1824); ACAlem	FRANCE: Isère, 12 km SW Bourgoin, NE St. Jean de Bournay; N45°31'02" E05°10'23", 395m; Quercus, Castanea, 2005, Stüben	ZFMK-DNA-JJ0163, ZFMK-TIS-cl0015	GU988225 GU987809
Acalles lemur lemur (Germar 1824); ACAlem	FRANCE: Isère, 19 km S Bourgoin, N Semons; N45°26'01" E05°12'06", 448m; Quercus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0014, ZFMK-TIS-cl0010	EU286281 EU286446
Acalles lemur lemur (Germar 1824); ACAlem	FRANCE: Isère, 22 km S Bourgoin, La Cote St. André; N45°24'04" E05°14'04", 469m; Castanea, 2005, Stüben	ZFMK-DNA-JJ0013, ZFMK-TIS-cl0005	GU988165 GU987755
Acalles lemur lemur (Germar 1824); ACAlem	GERMANY: Rheinland-Pfalz, Moseltal, 1 km N Treis-Karden; N50°11'08" E07°18'20", 250m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0038, ZFMK-TIS-cM0061	GU988181 GU987771
Acalles lemur lemur (Germar 1824); ACAlem	GERMANY: Rheinland-Pfalz, Moseltal, 10 km S Cochem, Bullay; N50°03'27" E07°08'51", 222m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0039, ZFMK-TIS-cM0059	GU988182 GU987772
Acalles lemur lemur (Germar 1824); ACAlem	FRANCE: Alpes-Maritimes, 9 km N Sospel, N Moulinet; N43°57'58" E07°24'55", 1111m; Castanea sativa, 2007, Stüben	ZFMK-DNA-JJ0409, ZFMK-TIS-cF438	GU988324 GU987896
Acalles lemur lemur (Germar 1824); ACAlem	GERMANY: Rheinl.-Pfalz, Altenahr, Teufelsloch; N50°30'36" E06°59'24", 150m; Quercus, Fagus, 2007, Stüben	ZFMK-DNA-JJ0346, ZFMK-TIS-cD0422	GU988297 GU987880
Acalles lemur lemur (Germar 1824); ACAlem	GERMANY: Rheinland-Pfalz, Eppenbrunn, „Lourdesgrotte"; N49°06'58" E07°33'20", 277m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0702, ZFMK-TIS-cD673	GU988480 GU988042
Acalles maraoensis Stüben 2001; ACAmar	PORTUGAL: Manteigas; N40°19'26" W07°34'20", 1531m; Betula, 2008	ZFMK-DNA-JJ0440, ZFMK-TIS-cP540	GU988337 GU987909
Acalles maraoensis Stüben 2001; ACAmar	PORTUGAL: Sa. Estrela, S Manteigas; N40°19'26" W07°34'20", 1532m; Betula, Cytisus, Erica, 2009	ZFMK-DNA-JJ0810, ZFMK-TIS-cE852	GU988548 GU988109
Acalles maraoensis Stüben 2001; ACAmar	PORTUGAL: Sa. Estrela, SW Manteigas; N40°18'45" W07°35'03", 1558m; Cytisus, 2009	ZFMK-DNA-JJ0815, ZFMK-TIS-cE857	GU988551 GU988112
Acalles maraoensis Stüben 2001; ACAmar	PORTUGAL: Sa. Gerês, NE Braga, S Lindoso; N41°49'48" W08°12'15", 974m; Amelanchier, Erica, Castanea, 2009	ZFMK-DNA-JJ0826, ZFMK-TIS-cE869	GU988559 GU988120
Acalles maraoensis Stüben 2001; ACAmar	PORTUGAL: Sa. Marão, W Vila Real, Alto do Espinho; N41°16'15" W07°54'17", 1145m; Amelanchier, Quercus pyrenaica, Cytisus, 2009	ZFMK-DNA-JJ0824, ZFMK-TIS-cE867	GU988557 GU988118
Acalles maraoensis Stüben 2001; ACAmar	SPAIN: Burgos, SE Burgos, W slope of Trigaza Mt.; N42°16'36" W03°15'32", 1496m; Cytisus, Fagus, 2009	ZFMK-DNA-JJ0832, ZFMK-TIS-cE875	GU988565 GU988126
Acalles maraoensis Stüben 2001; ACAmar	SPAIN: Toledo, SW Navahermosa, near Hontanar; N39°35'46" W04°30'11", 1100m; Quercus ilex, 2009	ZFMK-DNA-JJ0793, ZFMK-TIS-cE835	GU988534 GU988095
Acalles maraoensis Stüben 2001; ACAmar	SPAIN: Cáceres, 8 km W Guadalupe, Sierra de Guadalupe Las Villueras Mt.; N39°28'00" W05°24'22", 1475m; Quercus ilex, Quercus pubescens, 2004, Stüben	ZFMK-DNA-JJ0351, ZFMK-TIS-cE456	GU988300 _____
Acalles maraoensis Stüben 2001; ACAmar	SPAIN: Cáceres, 8 km W Guadalupe, Sierra de Guadalupe, Las Villueras Mt.; N39°28'00" W05°24'22", 1475m; Quercus ilex, Quercus pubescens, 2004, Stüben	ZFMK-DNA-JJ0520, ZFMK-TIS-cE581	GU988382 GU987943
Acalles maraoensis Stüben 2001; ACAmar	SPAIN: Castilla y León, Montes Aquilianos S Ponferrada, 4km SE Penalba de S, Los Portilliones; N42°24'08" W06°31'44", 2000m; broom, 2002, Stüben	ZFMK-DNA-JJ0360, ZFMK-TIS-cE465	GU988306 _____
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 14 km SW Bourgoin, St. Jean de Bournay; N45°30'28" E05°09'09", 406m; Castanea, Ilex, Quercus, 2005, Stüben	ZFMK-DNA-JJ0015, ZFMK-TIS-cl0003	GU988166 GU987756
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0164, ZFMK-TIS-cl0030	EU286329 EU286493
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0002, ZFMK-TIS-cl0017	GU988161 _____
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0003, ZFMK-TIS-cl0017	GU988162 _____
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0007, ZFMK-TIS-cl0017	GU988163 GU987753
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0009, ZFMK-TIS-cl0017	GU988164 _____
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0011, ZFMK-TIS-cl0017	GU987754 _____
Acalles micros Dieckmann 1982; ACAmic	FRANCE: Dép. Loire, SW Pélussin, Mont Pilat, near Crêt de l'Oeillon; N45°24'24" E04°37'06", 1122m; Fagus, 2009, Stüben	ZFMK-DNA-JJ0902, ZFMK-TIS-cF929	GU988600 GU988157

Acalles micros Dieckmann 1982; ACAmic	FRANCE: Isere, 4 km E La Chapelle-de-Surieu; N45°24'18" E04°56'26", 325m; Fagus, Alnus, 2006, Stüben	ZFMK-DNA-JJ0290, ZFMK-TIS-cF0242	GU988263 GU987845
Acalles micros Dieckmann 1982; ACAmic	GERMANY: Baden-W., Kaiserstuhl, "Auf dem Eck"; N48°06'32" E07°40'04", 432m; Fagus, Carpinus, Quercus, 2006, Stüben	ZFMK-DNA-JJ0291, ZFMK-TIS-cD0243	GU988264 GU987846
Acalles micros Dieckmann 1982; ACAmic	GERMANY: Rheinland-Pfalz, 12 km W Pirmasens, Walshausen; N49°13'15" E07°26'43", 347m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0701, ZFMK-TIS-cD672	GU988479 GU988041
Acalles misellus Boheman 1844; ACAmis	SPAIN: Barcelona, basin within quarry, near Vallirana; N41°22'04" E01°55'05"; Quercus ilex, Smilax aspera, Hedera helix, Laurus, 2008	ZFMK-DNA-JJ0549, ZFMK-TIS-cE610	GU988396 GU987956
Acalles misellus Boheman 1844; ACAmis	SPAIN: Barcelona, S. Montseny, Collformic, Font St. Jordi; N41°48'12" E02°20'48", 1132m; Rubus, Populus, 2008	ZFMK-DNA-JJ0552, ZFMK-TIS-cE613	GU988399 GU987959
Acalles misellus Boheman 1844; ACAmis	SPAIN: Barcelona, S. Montseny, Tordera valley, near St. Marçal; N41°48'01" E02°25'15", 1060m, 2008	ZFMK-DNA-JJ0554, ZFMK-TIS-cE615	GU988401 GU987961
Acalles misellus Boheman 1844; ACAmis	SPAIN: Barcelona, St. Esteve de Palautordera, Sta. Margarida; N41°43'07" E02°25'45", 254m; Ruscus, Hedera, Platanus, 2008	ZFMK-DNA-JJ0555, ZFMK-TIS-cE616	GU988402 GU987962
Acalles misellus Boheman 1844; ACAmis	SPAIN: La Rioja, SW Nájera, Monasterio de Valvanera; N42°13'31" W02°53'24", 1043m; Fagus, Ilex, 2009	ZFMK-DNA-JJ0834, ZFMK-TIS-cE877	GU988567
Acalles misellus Boheman 1844; ACAmis	SPAIN: León, NE León, N Riaño, SW Posada de Valdeón; N43°06'54" W04°59'33", 1431m; Fagus, 2009	ZFMK-DNA-JJ0829, ZFMK-TIS-cE872	GU988562 GU988123
Acalles misellus Boheman 1844; ACAmis	SPAIN: Palencia, N Cervera de Pisuerga, Pto. de Piedrasluengas; N43°02'57" W04°27'19", 1314m; Fagus, Ilex, 2009	ZFMK-DNA-JJ0831, ZFMK-TIS-cE874	GU988564 GU988125
Acalles misellus Boheman 1844; ACAmis	FRANCE: Dép. Pyrénées-Atlantique, S Sarnear Col de Lizarieta; N43°15'46" W01°36'27", 382m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0908, ZFMK-TIS-cF937	GU988606 GU988159
Acalles misellus Boheman 1844; ACAmis	FRANCE: Dép. Pyrénées-Atlantique, W Ciboure (near coast); N43°22'49" W01°42'59", 41m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0909, ZFMK-TIS-cF938	GU988607 GU988160
Acalles misellus Boheman 1844; ACAmis	NETHERLANDS: Zeeland, Walcheren, NE Oostkapelle, De Manteling (Oranjezon); N51°34'49" E03°33'45"; Quercus, 2009, Stüben	ZFMK-DNA-JJ0790, ZFMK-TIS-cNL832	GU988533 GU988094
Acalles monasterialis Stüben 2004; ACAmon	SPAIN: Salamanca, NW Béjar, NW Monforte de la Sierra, Peña de Francia, near cloister; N40°31'01" W06°10'15", 1636m; Cytisus, 2009	ZFMK-DNA-JJ0806, ZFMK-TIS-cE848	GU988545 GU988106
Acalles monasterialis Stüben 2004; ACAmon	SPAIN: Salamanca, 38 km NW Béjar, Sierra de la Peña de Francia, Monasterio; N40°31'01" W06°10'15", 1636m; Cytisus sp., 2004, Stüben	ZFMK-DNA-JJ0400, ZFMK-TIS-cE505	GU988319 GU987891
Acalles papei A. & F. Solari 1905; ACApap	CROATIA: Dalmatien, 4,5 km N Dnmis, Promina Mts.; N43°54'20" E16°10'01", 738m; Maccia, Quercus, Carpinus, Corylus, 2007, Stüben	ZFMK-DNA-JJ0190, ZFMK-TIS-cHR0327	EU286343 EU286507
Acalles papei A. & F. Solari 1905; ACApap	GREECE: Epirus, 19 km E Igoumenitsa, Petrovitsa; N39°33'30" E20°28'12", 355m; Arbutus/Platanus, 2007, Stüben	ZFMK-DNA-JJ0708, ZFMK-TIS-cEP0399	GU988484 GU988046
Acalles papei A. & F. Solari 1905; ACApap	GREECE: Epirus, 25 km SE Igoumenitsa, Chrisavgi; N39°26'43" E20°32'04", 187m; Quercus ilex, Platanus, 2007, Stüben	ZFMK-DNA-JJ0344, ZFMK-TIS-cEP0403	GU988295 GU987878
Acalles papei A. & F. Solari 1905; ACApap	GREECE: Korfu, 10 km SW Kerkyra, Kato Garouna; N39°31'14" E19°51'29", 357m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0706, ZFMK-TIS-cKO0378	GU988482 GU988044
Acalles papei A. & F. Solari 1905; ACApap	GREECE: Korfu, 18 km N Kerkyra, Loutsis, Megali Grava; N39°46'38" E19°53'21", 479m; Quercus pubescens, Laurus nobilis, Asphodelus, 2007, Stüben	ZFMK-DNA-JJ0334, ZFMK-TIS-cKO0369	GU988290 GU987873
Acalles parasierae Stüben 2002; ACAprs	MOROCCO: Rif, 10 km W Ketama; N34°57'40" W04°40'51", 1600m; Cedrus, Prunus, 2009, Stüben	ZFMK-DNA-JJ0867, ZFMK-TIS-cE910	GU988586 GU988146
Acalles parvulus Boheman 1837; ACApar	GERMANY: Rheinland-Pfalz, Moseltal, 5 km E Cochem, "Apoloweg"; N50°08'46" E07°12'51", 237m; Quercus, 2006	ZFMK-DNA-JJ0296, ZFMK-TIS-cD0250	GU988269 GU987851
Acalles parvulus Boheman 1837; ACApar	FRANCE: Isère, 14 km SW Bourgoin, St. Jean de Bournay; N45°30'28" E05°09'09", 406m; Castanea, Ilex, Quercus, 2005, Stüben	ZFMK-DNA-JJ0046, ZFMK-TIS-cl0002	GU988187 GU987777
Acalles parvulus Boheman 1837; ACApar	FRANCE: Isère, 19 km S Bourgoin, N Semons; N45°26'01" E05°12'06", 448m; Quercus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0018, ZFMK-TIS-cl0008	EU286283 EU286448
Acalles parvulus Boheman 1837; ACApar	GERMANY: Rheinland-Pfalz, Moseltal, 1 km N Treis- Karden; N50°11'08" E07°18'20", 250m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0036, ZFMK-TIS-cM0060	GU988180 GU987770
Acalles parvulus Boheman 1837; ACApar	FRANCE: Alpes-Maritimes, 6 km NE Sospel, Col de Brouis; N43°55'28" E07°28'37", 882m; broom, Helleborus, 2007, Stüben	ZFMK-DNA-JJ0403, ZFMK-TIS-cF432	GU988320 GU987892
Acalles parvulus	FRANCE: Isere, 4 km E La Chapelle-de-Surieu;	ZFMK-DNA-JJ0294,	GU988267

Boheman 1837; ACApar	N45°24'18" E04°56'26", 325m; Fagus, Alnus, 2006, Stüben	ZFMK-TIS-cF0248	GU987849
Acalles parvulus Boheman 1837; ACApar	FRANCE: Var, 27 km W Brignoles, Massif de la Sainte Baume; N43°19'42" E05°45'17", 703m; Fagus, 2006, Stüben	ZFMK-DNA-JJ0295, ZFMK-TIS-cF0249	GU988268 GU987850
Acalles parvulus Boheman 1837; ACApar	ITALY: Abruzzo, P.N. Majella, 11 km N Roccaraso, Bosco di S. Antonio; N41°56'27" E14°01'41", 1321m; Pyrus/Acer, 2008, Stüben	ZFMK-DNA-JJ0893, ZFMK-TIS-cl654	GU988594 GU988151
Acalles parvulus Boheman 1837; ACApar	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0560, ZFMK-TIS-cl621	GU988406 GU987966
Acalles parvulus Boheman 1837; ACApar	FRANCE: Isère, 10 km SE Vienne, 2001	ZFMK-DNA-JJ0028, ZFMK-TIS-cD0069	GU988174 GU987764
Acalles petryszaki Dieckmann 1982; ACApet	POLAND: 30 km E Nowy Targ, Karpaty Zachodnie, Pieniny Centralne (PNP), Kroszcienko-Kras; N49°25'58" E20°26'14", 440m; Fagus, 2004, Stüben	ZFMK-DNA-JJ0364, ZFMK-TIS-cPL469	GU988309
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0644, ZFMK-TIS-cE717	GU988454 GU988017
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; Ocotea foetens, 2008, Astrin & Stüben	ZFMK-DNA-JJ0651, ZFMK-TIS-cE724	GU988458 GU988021
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, Tenerife, E Los Silos, Teno Mts. El Tanque Bajo; N28°21'39" W16°46'19", 534m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0625, ZFMK-TIS-cE698	GU988445 GU988007
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, El Hierro, 3 km N San Andres, Montaña de la Fara; N27°47'39" W17°56'55", 936m; Sonchus hierrensis, 2006, Stüben	ZFMK-DNA-JJ0299, ZFMK-TIS-cE0253	GU988272 GU987854
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, El Hierro, 4 km SW La Frontera, El Parque; N27°44'20" W18°01'30", 739m; 2006, Stüben	ZFMK-DNA-JJ0465, ZFMK-TIS-cE0254	GU988347 GU987920
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, El Hierro, 7 km W La Frontera, Pista Derrabado; N27°44'29" W18°03'24", 895m; Laurus azorica, 2006, Stüben	ZFMK-DNA-JJ0080, ZFMK-TIS-cC0099	EU286296 EU286461
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, El Hierro, 9,5 km W La Frontera, Pista de Mencafitte; N27°44'06" W18°05'08", 929m; Chamaecytisus, Pericallis, Ficus, 2006, Stüben	ZFMK-DNA-JJ0297, ZFMK-TIS-cE0251	GU988270 GU987852
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, La Palma, 2,5 km W La Galga, above Cubo de la Galga, N28°45'18" W17°46'37", 857m; laurisilva, Juglans, 2006, Stüben	ZFMK-DNA-JJ0298, ZFMK-TIS-cE0252	GU988271 GU987853
Acalles pilula Wollaston 1864; ACApil	SPAIN: Canary Islands, La Palma, 5 km SE El Paso, Cumbre Nueva; N28°37'51" W17°49'36", 1415m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0302, ZFMK-TIS-cE0255	GU988274 GU987856
Acalles ptinoides (Marsham 1802); ACApti	SPAIN: Asturias, S Oviedo, SW Pto. de Pajares, Valgrande ski station; N42°58'25" W05°46'30", 1649m; Betula, Erica, Ilex, Cytisus, 2009	ZFMK-DNA-JJ0827, ZFMK-TIS-cE870	GU988560 GU988121
Acalles ptinoides (Marsham 1802); ACApti	SPAIN: Asturias, SE Oviedo, nr. Tarna; N43°06'16" W05°13'03", 1322m; Fagus, Cytisus, 2009	ZFMK-DNA-JJ0828, ZFMK-TIS-cE871	GU988561 GU988122
Acalles ptinoides (Marsham 1802); ACApti	SPAIN: Burgos, SE Burgos, W slope of Trigaza Mt.; N42°16'36" W03°15'32", 1496m; Cytisus, Fagus, 2009	ZFMK-DNA-JJ0833, ZFMK-TIS-cE876	GU988566 GU988127
Acalles ptinoides (Marsham 1802); ACApti	GERMANY: NRW, Niederrhein, W Moenchengladbach, 3 km E Niederkrüchten; N51°11'56" E06°15'38"; Sphagnum, 2007, Stüben	ZFMK-DNA-JJ0210, ZFMK-TIS-cD0256	EU286359 EU286522
Acalles ptinoides (Marsham 1802); ACApti	GERMANY: NRW, N Mönchengladbach, Helenabrunn; N51°13'34" E06°24'00", 60m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0680, ZFMK-TIS-cD671	GU988473 GU988036
Acalles ptinoides (Marsham 1802); ACApti	GERMANY: Rheinland-Pfalz, W Karlsruhe, Bienwald; N49°00'49" E08°05'18", 130m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0900, ZFMK-TIS-cD927	GU988598 GU988155
Acalles sardiniaensis Stüben 2001; ACAsad	ITALY: Sardinia, 21 km SO Aritzo, Barbagia Seulo, Monte Arqueri; N39°49'02" E09°21'59", 950m; Quercus ilex, 2004, Stüben	ZFMK-DNA-JJ0355, ZFMK-TIS-cl460	GU988303 GU987882
Acalles sarothamni Stüben 2003; ACAsar	SPAIN: Ávila, 46 km SW Ávila, Sierra de Villafranca, Navacepedilla; N40°28'59" W05°11'08", 1266m; Cytisus, 2004, Stüben	ZFMK-DNA-JJ0362, ZFMK-TIS-cE467	GU988308 GU987886
Acalles sarothamni Stüben 2003; ACAsar	SPAIN: Castilla y León, Sierra de Gredos, 14 km NE Arenas de S. Pedro, Pto. del Pico; N40°19'20" W05°00'50", 1396m; Sarothamnus sp., 2003, Stüben	ZFMK-DNA-JJ0361, ZFMK-TIS-cE466	GU988307 GU987885
Acalles setulipennis Desbrochers 1871; ACAsep	FRANCE: Corsica, Col de Vizzavona, 22 km S Corte; N42°06'45" E09°06'49", 1100m; Fagus, 2001, Stüben	ZFMK-DNA-JJ0523, ZFMK-TIS-cE584	GU988383
Acalles setulipennis Desbrochers 1871; ACAsep	FRANCE: Corsica, Col de Vizzavona, 22 km S Corte; N42°06'45" E09°06'49", 1100m; Fagus, 2001, Stüben	ZFMK-DNA-JJ0883, ZFMK-TIS-cF472	GU988593

Acalles sierrae H. Brisout 1865; ACAsie	SPAIN: Andalucía, 12 km N Laujar, Sierra Nevada; N37°05'45" W02°57'37", 2285m; Erinacea anthyllis, 2005, Stüben	ZFMK-DNA-JJ0148, ZFMK-TIS-cE0100	EU286328 EU286492
Acalles sierrae H. Brisout 1865; ACAsie	SPAIN: Andalucía, 17 km NW Laujar, Sierra Nevada, S Puerto de la Ragua; N37°06'11" W03°01'40", 2070m; Bupleurum, broom, 2005, Stüben	ZFMK-DNA-JJ0306, ZFMK-TIS-cE0261	GU988277 GU987859
Acalles sintraniensis Stüben 1999; ACAsin	PORTUGAL: Sa. Estrela, S Manteigas; N40°19'26" W07°34'20", 1532m; Betula, Cytisus, Erica, 2009	ZFMK-DNA-JJ0811, ZFMK-TIS-cE853	GU988549 GU988110
Acalles sintraniensis Stüben 1999; ACAsin	PORTUGAL: Sa. Estrela, SW Manteigas; N40°18'45" W07°35'03", 1558m; Cytisus, 2009	ZFMK-DNA-JJ0814, ZFMK-TIS-cE856	GU988550 GU988111
Acalles sp. 1; ACAas1	ITALY: Elba, Mt. Capanne; 1000m, 2006, Germann	ZFMK-DNA-JJ0349, ZFMK-TIS-cl454	GU988299
Acalles sp. 2; ACAas2	MOROCCO: Middle Atlas, Ibel bou Iblane; N33°32,736' W4°09,295', 2279m, 2009, Borovec	ZFMK-DNA-JJ0918, ZFMK-TIS-cM955	GU988609
Acalles temperei Péricart 1987; ACAtem	FRANCE: Les Houches, Carlaveyron, 2007, Brustel	ZFMK-DNA-JJ0769, ZFMK-TIS-cF804	GU988080
Acalles temperei Péricart 1987; ACAtem	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0020, ZFMK-TIS-cl0029	GU988168 GU987758
Acalles temperei Péricart 1987; ACAtem	FRANCE: Isère, 7 km N Grenoble, Massif de la Chartreus, Umg. Quaix en Ch.; N45°14'53" E05°44'31", 613m; Fagus, Ilex, 2005, Stüben	ZFMK-DNA-JJ0165, ZFMK-TIS-cl0042	GU988226 GU987810
Acalles temperei Péricart 1987; ACAtem	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'13", 719m; Quercus, 2005, Stüben	ZFMK-DNA-JJ0019, ZFMK-TIS-cl0023	EU286284 EU286449
Acalles testensis Stüben 2003; ACAtes	MOROCCO: High Atlas, N Tizi-n-Test, Tachguette; N30°52'25" W08°21'25", 2047m; Euphorbia nicaeensis, Quercus ilex, broom, 2009, Stüben	ZFMK-DNA-JJ0837, ZFMK-TIS-cE880	GU988568 GU988128
Acalles tibialis (Weise 1891); ACAtib	FRANCE: Alpes-Maritimes, 3 km W Sospel, Col de Braus; N43°52'34" E07°24'17", 1051m; Quercus pubescens, Ostrya carpinifolia, broom, 2007, Stüben	ZFMK-DNA-JJ0413, ZFMK-TIS-cF442	GU988326 GU987898
Acalles tibialis (Weise 1891); ACAtib	FRANCE: Alpes-Maritimes, 8 km NW Sospel (2 km S Peira Cava), Baisse de la Cabanette; N43°54'53" E07°21'11", 1371m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0406, ZFMK-TIS-cF435	GU988323 GU987895
Acallocrates colonnellii Bahr 2003; ACCcol	CROATIA: Dalmatien, 6 km E Karlobag, Velebit Mts., Ostarijska vrata; N44°31'45" E15°08'34", 927m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0192, ZFMK-TIS-cHR0333	EU286345 EU286509
Acallocrates colonnellii Bahr 2003; ACCcol	SLOVENIA: Sv. Ana env., 20 km NE of Maribor; Fagus, Quercus, 2006, Stejskal	ZFMK-DNA-JJ0083, ZFMK-TIS-cSLO0119	EU286297 EU286462
Acallocrates denticolis (Germar 1824); ACCden	GREECE: Epirus, 9 km SW Metsovo, Mikro Peristeri; N39°45'03" E21°05'09", 693m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0707, ZFMK-TIS-cEP0389	GU988483 GU988045
Acallocrates denticolis (Germar 1824); ACCden	GREECE: Epirus, N Metsovo, Milia [Miléa]; N39°51'15" E21°13'32", 1146m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0340, ZFMK-TIS-cEP0387	GU988293 GU987876
Acallocrates denticollis (Germar 1824); ACCden	GREECE: Kreta W, Levka Ori, Imbros, above the Imbros Gorge; N35°14'51" E24°10'30", 900m; Quercus, 2006, Bahr & Bayer	ZFMK-DNA-JJ0096, ZFMK-TIS-cGR0118	GU988209 GU987794
Acallocrates denticollis (Germar 1824); ACCden	CROATIA: Dalmatien, 4,5 km N Drnis, Promina Mts.; N43°54'20" E16°10'01", 738 m; Quercus, Carpinus, Corylus, 2007, Stüben	ZFMK-DNA-JJ0326, ZFMK-TIS-cHR0325	GU988285 GU987868
Acallocrates denticollis (Germar 1824); ACCden	CROATIA: Dalmatien, 7 km N Makarska, Biokovo Mts., Bast; N43°21'26" E16°59'18", 415m; Quercus, 2007, Stüben	ZFMK-DNA-JJ0189, ZFMK-TIS-cHR0320	GU988231 GU987815
Acallocrates denticollis (Germar 1824); ACCden	GREECE: Korfu, 24 km S Kerkyra, S Perivoli; N39°24'08" E20°00'19", 93m; Laurus, Quercus, Arbutus, Smilax, 2007, Stüben	ZFMK-DNA-JJ0336, ZFMK-TIS-cKO0382	GU988292 GU987875
Acallocrates minutesquamosus (Reiche 1860); ACCmin	FRANCE: Var, 27 km W Brignoles, Massif de la Sainte Baume; N43°19'42" E05°45'17", 703m; Fagus, 2006, Stüben	ZFMK-DNA-JJ0185, ZFMK-TIS-cF0262	EU286340 EU286504
Acallocrates minutesquamosus (Reiche 1860); ACCmin	ITALY: Basilicata, Monte Pollino, 4 km SE Rotonda, Zarafa; N39°56'33" E16°04'28", 677m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0582, ZFMK-TIS-cl643	GU988422 GU987983
Acallocrates minutesquamosus (Reiche 1860); ACCmin	ITALY: Campania, Cilento, 14 km SW Vallo d. Lucania, Marina di Ascea; N40°07'42" E15°10'53", 13m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0569, ZFMK-TIS-cl630	GU988412 GU987972
Acallorneuma doderoi A. & F. Solari 1908; ACNdod	ITALY: Sicilia (PA), 5 km E Partinico, Santuario del Romitello; N38°02'37" E13°09'51", 720m; Quercus ilex, Fraxinus, 2006, Stüben	ZFMK-DNA-JJ0097, ZFMK-TIS-cl0120	GU988210 GU987795
Acallorneuma doderoi A. & F. Solari 1908; ACNdod	ITALY: Sicilia (PA), 3 km SE Palazzo Adriano; N37°39'46" E13°23'56", 1100m, 2002, Stüben	ZFMK-DNA-JJ0064, ZFMK-TIS-cS0081	GU988193
Acallorneuma doderoi A. & F. Solari 1908; ACNdod	ITALY: Sicilia (PA), 6 km SW Godrano, Bosco Ficuzza, Mte. Rocca Busambra; N37°51'38" E13°23'24", 1200m; Quercus, Fraxinus, 2002, Stüben	ZFMK-DNA-JJ0065, ZFMK-TIS-cS0082	EU286292 EU286457
Acallorneuma sabellai Osella & Zuppa 2002; ACNsab	ITALY: Sicilia (PA), 10 km NW Petralia Soprana, P.R. Madonie; N37°50'29" E14°00'39", 1000m; Fraxinus, Quercus ilex, Sorothamnus, Euphorbia, 2002,	ZFMK-DNA-JJ0066, ZFMK-TIS-cS0083	GU988194

Germann			
Acallorneuma sabellai Osella & Zuppa 2002; ACNsab	ITALY: Sicilia (PA), 10 km NW Petralia Soprana, P.R. Madonie; N37°50'29" E14°00'39", 1000m; Fraxinus, Quercus ilex, Sorothamnus, Euphorbia, 2002, Stüben	ZFMK-DNA-JJ0063, ZFMK-TIS-cS0080	GU988192
Aeoniacalles aeonii (Wollaston 1864); AEOaeo	SPAIN: Canary Islands, Tenerife, East Anaga Mts, 19 km NE La Laguna, Lomo de las Bodegas; N28°33'43" W16°09'25", 500m; Aeonium holochrysum, 2003, Stüben	ZFMK-DNA-JJ0486, ZFMK-TIS-cE547	GU988358 GU987927
Aeoniacalles aeonii (Wollaston 1864); AEOaeo	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Afur; N28°33'04" W16°15'12", 831m; Aeonium cuneatum, 2008, Astrin & Stüben	ZFMK-DNA-JJ0616, ZFMK-TIS-cE689	FJ716518 FJ716567
Aeoniacalles aeonii (Wollaston 1864); AEOaeo	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts. near Masca, Los Carizales; N28°19'11" W16°52'08", 434m; Aeonium tabulaeforme, 2008, Astrin & Stüben	ZFMK-DNA-JJ0631, ZFMK-TIS-cE704	GU988447 GU988009
Aeoniacalles aeonii (Wollaston 1864); AEOaeo	SPAIN: Canary Islands, Tenerife, , Anaga Mts., 10 km NE La Laguna, Afur, N28°33'10" W16°14'59", 300m, Aeonium cuneatum, 2003, Stüben	ZFMK-DNA-JJ0149, ZFMK-TIS-cC0101	GU988217 GU987800
Aeoniacalles aeonisimilis (Stüben 2000); AEOaes	SPAIN: Canary Islands, La Gomera, 2,5 km E Hermigua; N28°09'30" W17°09'46", 650m; Aeonium, 2004, Stüben	ZFMK-DNA-JJ0487, ZFMK-TIS-cE548	GU988359
Aeoniacalles aeonisimilis (Stüben 2000); AEOaes	SPAIN: Canary Islands, La Palma, 6,5 km E Garafia, El Tablado, El Portal; N28°50'04" W17°52'36", 300m; Aeonium palmense, 2003, Stüben	ZFMK-DNA-JJ0151, ZFMK-TIS-cC0102	GU988218 GU987801
Aeoniacalles aeonisimilis (Stüben 2000); AEOaes	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m; Aeonium, 2008, Astrin & Stüben	ZFMK-DNA-JJ0652, ZFMK-TIS-cE725	FJ716529 FJ716577
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Gomera, Hermigua, Ermita de San Juan; N28°09'39" W17°12'19", 513m; Kleinia, 2008, Astrin & Stüben	ZFMK-DNA-JJ0663, ZFMK-TIS-cE736	GU988463 GU988026
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, El Hierro, 2 km E Sabinosa, La Tabla; N27°44'54" W18°04'53", 182m; Kleinia neriifolia, 2006, Stüben	ZFMK-DNA-JJ0153, ZFMK-TIS-cC0105	GU988219 GU987802
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Gomera, 2 km SW Hermigua, Ermita de San Juan; N28°09'40" W17°12'20", 510m; Kleinia neriifolia, 2004, Stüben	ZFMK-DNA-JJ0488, ZFMK-TIS-cE549	GU988360
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Palma, 2,5 km SW Puntagorda, Llanos de Fagundo; N28°45'22" W18°00'12", 172m; Kleinia neriifolia, 2006, Stüben	ZFMK-DNA-JJ0283, ZFMK-TIS-cE0223	GU988258 GU987841
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Palma, 4 km NW Tijarafe; N28°43'19" W17°58'47", 35m; Kleinia neriifolia, 2006, Stüben	ZFMK-DNA-JJ0282, ZFMK-TIS-cE0222	GU988257 GU987840
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Palma, 4,5 km NE Garafia, 1 km N El Mudo; N28°50'36" W17°54'07", 254m; Kleinia neriifolia, 2006, Stüben	ZFMK-DNA-JJ0152, ZFMK-TIS-cC0103	FJ716487 FJ716539
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Palma, 9 km NW Las Caletas, El Remo; N28°33'07" W17°53'09", 63m; Kleinia neriifolia, 2006, Stüben	ZFMK-DNA-JJ0281, ZFMK-TIS-cE0221	GU988256 GU987839
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, Tenerife, East Anaga Mts, 19 km NE La Laguna, Lomo de las Bodegas; N28°33'43" W16°09'25", 500m; Kleinia, 2003, Stüben	ZFMK-DNA-JJ0489, ZFMK-TIS-cE550	GU988361 GU987928
Aeoniacalles argillosus (Boheman 1837); AEOarg	SPAIN: Canary Islands, La Gomera, 2 km SW Hermigua, Ermita de San Juan; N28°09'40" W17°12'20", 510m; Kleinia neriifolia, 2004	ZFMK-DNA-JJ0139, ZFMK-TIS-cC0104	GU988214
Aeoniacalles grancanariensis (Stüben 2000); AEOgra	SPAIN: Canary Islands, Gran Canaria, Las Lagunetas, Bco. La Mina; 1300m, 1999, Stüben	ZFMK-DNA-JJ0691, ZFMK-TIS-cE752	FJ716534 GU988039
Calacalles atomarius Bahr 2000; CALato	SPAIN: Canary Islands, Tenerife, East Anaga Mts, E La Laguna, E Lomo de las Bodegas; N28°33'38" W16°09'20", 500m; Sonchus spp., A. cuneatum, 2003, Stüben	ZFMK-DNA-JJ0515, ZFMK-TIS-cE576	FJ716512 FJ716561
Calacalles azoricus Stüben 2004; CALazo	PORTUGAL: Azores, Faial, Caldeira, "Res. Natural da Caldeira do Faial"; N38°35'10" W28°42'04", 886m; Tolpis azorica, 2003, Stüben	ZFMK-DNA-JJ0102, ZFMK-TIS-cP0125	EU286303 EU286468
Calacalles droueti (Crotch 1867); CALdru	PORTUGAL: Azores, Pico, Pico da Urze; N38°27'21" W28°21'04", 811m; Euphorbia stygiana, 2003, Stüben	ZFMK-DNA-JJ0100, ZFMK-TIS-cP0123	EU286302 EU286467
Calacalles droueti (Crotch 1867); CALdru	PORTUGAL: Azores, Faial, Caldeira, "Res. Natural da Caldeira do Faial"; N38°35'10" W28°42'04", 886m; Euphorbia stygiana, 2003, Stüben	ZFMK-DNA-JJ0516, ZFMK-TIS-cE577	GU988378
Calacalles droueti (Crotch 1867); CALdru	PORTUGAL: Azores, Faial, Caldeira, "Res. Natural da Caldeira do Faial"; N38°35'10" W28°42'04", 886m; Euphorbia stygiana, 2003, Stüben	ZFMK-DNA-JJ0517, ZFMK-TIS-cE578	GU988379 GU987940
Calacalles exiguus Bahr 2000; CALexi	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts., forest Las Mercedes; N28°31'49" W16°17'12", 905m; Ilex platyfolia, 2008, Floren & Machado	ZFMK-DNA-JJ0723, ZFMK-TIS-cE818	GU988489 GU988051

Calacalles exiguus Bahr 2000; CALexi	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts., forest Las Mercedes; N28°31'49" W16°17'12", 905m; Laurus novocanariensis, 2008, Floren & Machado	ZFMK-DNA-JJ0719, ZFMK-TIS-cE817	GQ332322 GQ332337
Calacalles exiguus Bahr 2000; CALexi	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts., forest Las Mercedes; N28°31'49" W16°17'16", 889m; Ilex platyfolia, 2008, Floren & Machado	ZFMK-DNA-JJ0725, ZFMK-TIS-cE820	GU988490 GU988052
Calacalles hermigua Stüben & Astrin 2009; CALher	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro; N28°08'18" W17°12'52", 791m; Sonchus, 2008, Astrin	ZFMK-DNA-JJ0686, ZFMK-TIS-cE747	GQ332318 GQ332334
Calacalles hermigua Stüben & Astrin 2009; CALher	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Mirador El Bailadero; N28°07'22" W17°12'29", 994m; Sonchus gomerensis, Sonchus radicata, Aeonium, 2008, Astrin & Stüben	ZFMK-DNA-JJ0685, ZFMK-TIS-cE746	GU988475 GU988038
Calacalles hermigua Stüben & Astrin 2009; CALher	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas del Palmar; N28°09'29" W17°09'37", 627m; thermophilous shrub forest, 2008, Astrin & Stüben	ZFMK-DNA-JJ0681, ZFMK-TIS-cE742	GQ332315 GQ332331
Calacalles hermigua Stüben & Astrin 2009; CALher	SPAIN: Canary Islands, La Gomera, 2,5 km E Hermigua; N28°09'30" W17°09'46", 650m; Sonchus sp., 2004, Stüben	ZFMK-DNA-JJ0514, ZFMK-TIS-cE575	GU988377 _____
Calacalles kabylianus (Peyerimhoff 1925); CALkab	LIBYA: Cyrenaique, Ras el Hilal (battage), 2009, Pelletier	ZFMK-DNA-JJ0899, ZFMK-TIS-cL948	GU988597 GU988154
Calacalles minutus Bahr 2000; CALmts	SPAIN: Canary Islands, Tenerife, Teno Mts., Erjos, W Casa Forestal; N28°19'30" W16°48'32", 1030m, 2005, Schönfeld	ZFMK-DNA-JJ0726, ZFMK-TIS-cE821	GQ332327 GQ332342
Calacalles moraguesi (Desbrochers 1898); CALmor	SPAIN: Mallorca, 6 km NE Pollença, Cala Sant Vicenç; N39°54'56" E03°03'03", 19m; Smilax aspera, Quercus ilex, 2004, Stüben	ZFMK-DNA-JJ0379, ZFMK-TIS-cE484	FJ716492 _____
Calacalles nataliae Astrin & Stüben 2009; CALnat	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas del Palmar; N28°09'29" W17°09'37", 627m; thermophilous shrub forest, 2008, Astrin & Stüben	ZFMK-DNA-JJ0682, ZFMK-TIS-cE743	GQ332316 GQ332332
Calacalles nataliae Astrin & Stüben 2009; CALnat	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas del Palmar; N28°09'29" W17°09'37", 627m; thermophilous shrub forest, 2008, Astrin & Stüben	ZFMK-DNA-JJ0683, ZFMK-TIS-cE744	GU988474 GU988037
Calacalles nataliae Astrin & Stüben 2009; CALnat	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas del Palmar; N28°09'29" W17°09'37", 627m; thermophilous shrub forest, 2008, Astrin & Stüben	ZFMK-DNA-JJ0684, ZFMK-TIS-cE745	GQ332317 GQ332333
Calacalles palmensis (Roudier 1954); CALpam	SPAIN: Canary Islands, La Palma, 11 km NE El Paso, Mt. Tagoja; N28°43'18" W17°47'07", 1047m; laurisilva, Chamaecytisus proliferus, 2006, Stüben	ZFMK-DNA-JJ0098, ZFMK-TIS-cC0121	EU286301 EU286466
Calacalles palmensis (Roudier 1954); CALpam	SPAIN: Canary Islands, La Palma, 11 km NE El Paso, Mt. Tagoja; N28°43'18" W17°47'07", 1047m; laurisilva, Chamaecytisus proliferus, 2006, Stüben	ZFMK-DNA-JJ0722, ZFMK-TIS-cC0121	GQ332325 GQ332340
Calacalles pumilio Bahr 2000; CALpum	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; Myrica faya, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0718, ZFMK-TIS-cE811	GQ332321 GQ332336
Calacalles pumilio Bahr 2000; CALpum	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts., Monte del Agua, Chupadero; N28°19'23" W16°49'15", 942m; Picconia excelsa, Laurus novocanariensis, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0721, ZFMK-TIS-cE812	GQ332324 GQ332339
Calacalles pusillus Bahr 2000; CALpus	SPAIN: Canary Islands, Tenerife, E Los Silos, Teno Mts. El Tanque Bajo; N28°21'39" W16°46'19", 534m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0629, ZFMK-TIS-cE702	FJ716521 FJ716570
Calacalles seticolis (Wollaston 1864); CALset	SPAIN: Canary Islands, El Hierro, 1 km SW Guarazoca, Camino de la Pena; N27°48'06" W17°58'47", 746m; Carlina salicifolia, 2007, Stüben	ZFMK-DNA-JJ0307, ZFMK-TIS-cE0265	GQ332312 GU987860
Calacalles seticolis (Wollaston 1864); CALset	SPAIN: Canary Islands, El Hierro, 4 km SW La Frontera, El Parque; N27°44'20" W18°01'30", 739m; Sonchus hierrensis, 2006, Stüben	ZFMK-DNA-JJ0099, ZFMK-TIS-cC0122	GQ332311 GQ332328
Calacalles sp. 1 Bahr 2000; CALcs1	SPAIN: Canary Islands, Tenerife, Anaga Mts., 2 km E La Cumbre; N28°32'22" W16°13'21", 750m, 2005, Schönfeld	ZFMK-DNA-JJ0717, ZFMK-TIS-cE822	GQ332320 GU988050
Calacalles subcarinatus (Israelson 1984); CALsub	PORTUGAL: Azores, Is. Terceira, 3 km N S. Batolomeu; N38°41'11" W27°16'27", 210m; Castanes sativa, 2003, Stüben	ZFMK-DNA-JJ0728, ZFMK-TIS-cP926	GU988492 _____
Calacalles subcarinatus (Israelson 1984); CALsub	PORTUGAL: Azores, S. Miguel, Lagoa do Fogo; N37°46'16" W25°29'07", 720m; Ilex perado, 2003, Stüben	ZFMK-DNA-JJ0380, ZFMK-TIS-cP485	GU988313 _____
Calacalles subcarinatus	PORTUGAL: Azores, S. Miguel, Lagoa do Fogo;	ZFMK-DNA-JJ0473,	GU988351

(Israelson 1984); CALsub	N37°46'16" W25°29'07", 720m; Ilex perado, 2003, Stüben	ZFMK-TIS-cP485	
Calacalles subcarinatus (Israelson 1984); CALsub	PORTUGAL: Azores, S. Miguel, Lagoa do Fogo; N37°46'16" W25°29'07", 720m; Ilex perado, 2003, Stüben	ZFMK-DNA-JJ0716, ZFMK-TIS-cP485	GQ332319
Calacalles theryi (Peyerimhoff 1925); CALthe	PORTUGAL: N Caldas da Rainha, SW Nazaré, São Martinho do Porto; N39°30'24" W09°08'48", 3m; Crithmum maritimum, 2009	ZFMK-DNA-JJ0720, ZFMK-TIS-cE865	GQ332323 GQ332338
Calacalles theryi (Peyerimhoff 1925); CALthe	MOROCCO: 2 km S Essaouira; N31°28'08" W09°45'27", 22m; Senecio anteuphorbium, 2009, Stüben	ZFMK-DNA-JJ0724, ZFMK-TIS-cE914	GQ332326 GQ332341
Calacalles theryi (Peyerimhoff 1925); CALthe	MOROCCO: N Agadir, Tarhazoute; N30°33'20" W09°44'22", 68m; Senecio anteuphorbium, 2009, Stüben	ZFMK-DNA-JJ0727, ZFMK-TIS-cE921	GU988491
Calacalles wollastoni (Chevrolat 1852); CALwol	PORTUGAL: Madeira, 3 km W Porto Moniz, Santa Madalena; N32°51'31" W17°12'11", 391m; Ficus carica, 2008	ZFMK-DNA-JJ0455, ZFMK-TIS-cP520	FJ716507 FJ716557
Calacalles wollastoni (Chevrolat 1852); CALwol	PORTUGAL: Madeira, Santana; N32°48'12" W16°52'53", 457m; Castanea sativa, 2008, Stüben	ZFMK-DNA-JJ0444, ZFMK-TIS-cP507	GQ332313 GQ332329
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Tenerife, E Los Silos, Teno Mts. El Tanque Bajo; N28°21'39" W16°46'19", 534m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0627, ZFMK-TIS-cE700	GU988446 GU988008
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte, Levada; N28°21'35" W16°52'05", 230m; Foeniculum vulgare, 2008, Astrin & Stüben	ZFMK-DNA-JJ0636, ZFMK-TIS-cE709	FJ716523 FJ716572
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte; N28°21'36" W16°52'10", 231m; Ceropogia dichotoma, 2008, Astrin & Stüben	ZFMK-DNA-JJ0622, ZFMK-TIS-cE695	GQ332314 GQ332330
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Tenerife, 6 km W Los Silos, Casa Blanca; N28°21'40" W16°52'15", 120m; Ceropogia dichotoma, 2003, Stüben	ZFMK-DNA-JJ0280, ZFMK-TIS-cE0220	GU988255 GU987838
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Tenerife, East Anaga Mts, 20 km NE La Laguna, Lomo de las Bodegas; N28°33'43" W16°08'39", 270m, 2003, Stüben	ZFMK-DNA-JJ0495, ZFMK-TIS-cE556	GU988366
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Gran Canaria, La Atalaya, Bco. De los Golerias; 400m; Ferula linkii, 1999, Stüben	ZFMK-DNA-JJ0692, ZFMK-TIS-cE753	GU988476
Canariacalles alluaudi (Uyttenboogaart 1940); CANall	SPAIN: Canary Islands, Gran Canaria, Tenteniguada; 700m; Ferula linkii, 1999, Stüben	ZFMK-DNA-JJ0693, ZFMK-TIS-cE754	GU988477
Cionus sp.; CNS	GERMANY: Rheinland-Pfalz, Moseltal, Cochem, Dekernbach, mountain Wakelay; N50°09'31" E07°09'09", 301m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0042, ZFMK-TIS-cM0068	GU988184 GU987774
Coeliodes sp.; COE	GERMANY: Rheinland-Pfalz, Moseltal, 4 km S Cochem, N Eller-Edinger, "Calmond"; N50°06'52" E07°08'39", 273m; Carpinus, 2005, Stüben	ZFMK-DNA-JJ0166, ZFMK-TIS-cM0053	GU981522 GU981474
Coloracalles humerosus (Fairmaire 1862); COLhum	SPAIN: Barcelona, basin within quarry, near Vallirana; N41°22'04" E01°55'05"; Quercus ilex, Smilax aspera, Hedera helix, Laurus, 2008	ZFMK-DNA-JJ0548, ZFMK-TIS-cE609	GU988395 GU987955
Coloracalles humerosus (Fairmaire 1862); COLhum	SPAIN: Castellón, Morella, Barranco de la Bota; N40°33'12" W00°00'27", 814m; Quercus ilex, Hedera helix, 2008	ZFMK-DNA-JJ0545, ZFMK-TIS-cE606	GU988392 GU987952
Coloracalles humerosus (Fairmaire 1862); COLhum	FRANCE: Gard, 15 km NE Nimes, Pont du Gard, Collias; N43°57'03" E04°28'59", 68m; Quercus ilex, 2006, Stüben	ZFMK-DNA-JJ0079, ZFMK-TIS-cF0098	EU286295 EU286460
Cryptorhynchus lapathi (Linné 1758); CRRlap	GERMANY: Mönchengladbach, Neuwerk, 2004, Stüben	ZFMK-DNA-JJ0215, ZFMK-TIS-cD0355	GU988233
Cryptorhynchus lapathi (Linné 1758); CRRlap	GERMANY: Bienen bei Rees, Altrheinarm, 2004, Scharf	ZFMK-DNA-JJ0214, ZFMK-TIS-cD0354	EU286360 EU286523
Dendroacalles euphorbiacus (Stüben 2000); DENeph	SPAIN: Canary Islands, La Palma, 1,5 km N Las Caletas; N28°29'54" W17°50'00", 663m; Euphorbia regis-jubae, 2006, Stüben	ZFMK-DNA-JJ0309, ZFMK-TIS-cE0267	GU988278 GU987861
Dendroacalles euphorbiacus (Stüben 2000); DENeph	SPAIN: Canary Islands, La Palma, 4,5 km NE Garafia, 1 km N El Mudo; N28°50'36" W17°54'07", 254m; Euphorbia regis-jubae, 2006, Stüben	ZFMK-DNA-JJ0113, ZFMK-TIS-cC0138	EU286310 EU286475
Dendroacalles fortunatus (Wollaston 1864); DENfor	SPAIN: Canary Islands, La Gomera, SW Hermigua, Los Aceviños; N28°08'24" W17°13'45", 992m; Persea indica, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0772, ZFMK-TIS-cE807	GU988520 GU988081
Dendroacalles fortunatus (Wollaston 1864); DENfor	SPAIN: Canary Islands, La Gomera, SW Hermigua, Los Aceviños; N28°08'24" W17°13'45", 992m; Persea indica, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0773, ZFMK-TIS-cE808	GU988521 GU988082
Dendroacalles fortunatus (Wollaston 1864); DENfor	SPAIN: Canary Islands, La Gomera, SW Hermigua, Los Aceviños; N28°08'24" W17°13'45", 992m; Persea indica, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0774, ZFMK-TIS-cE809	GU988522 GU988083
Dendroacalles fortunatus	SPAIN: Canary Islands, La Gomera, S Hermigua, El	ZFMK-DNA-JJ0642,	GU988453



(Wollaston 1864); DENfor	Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; laurisilva, 2008, Astrin & Stüben	ZFMK-TIS-cE715	GU988016
Dendroacalles fortunatus (Wollaston 1864); DENfor	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; Ocotea foetens, 2008, Astrin & Stüben	ZFMK-DNA-JJ0649, ZFMK-TIS-cE722	GU988457 GU988020
Dendroacalles ornatus (Wollaston 1854); DENorm	PORTUGAL: Madeira, 3 km W Seixal, "Lagoa" near "Fanal"; N32°48'47" W17°08'59", 950m; Ocotea foetens, 2008	ZFMK-DNA-JJ0432, ZFMK-TIS-cP530	FJ716497 FJ716548
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, La Gomera, E Hermigua; N28°09'09" W17°09'50", 708m; Euphorbia regis-jubae, 2008, Astrin & Stüben	ZFMK-DNA-JJ0667, ZFMK-TIS-cE740	GU988464 GU988027
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, La Gomera, Hermigua, Ermita de San Juan; N28°09'39" W17°12'19", 513m; Euphorbia regis-jubae, 2008, Astrin & Stüben	ZFMK-DNA-JJ0662, ZFMK-TIS-cE735	GU988462 GU988025
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m; Euphorbia regis-jubae, 2008, Astrin & Stüben	ZFMK-DNA-JJ0657, ZFMK-TIS-cE730	GU988461 GU988024
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts. near Masca, Los Carizales; N28°19'11" W16°52'08", 434m; Euphorbia atropurpurea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0632, ZFMK-TIS-cE705	GU988448 GU988010
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte; N28°21'36" W16°52'10", 231m; Euphorbia atropurpurea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0621, ZFMK-TIS-cE694	GU988442 GU988004
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, El Hierro, 3 km SW Sabinosa, La Dehesa, Piedra del Regidor; N27°43'53" W18°07'04", 725m; Euphorbia regis-jubae, 2006, Stüben	ZFMK-DNA-JJ0114, ZFMK-TIS-cC0141	EU286311 EU286476
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, El Hierro, 5 km NE Faro de Orchilla, Roque Grande; N27°43'19" W18°06'01", 808m; Euphorbia regis-jubae, 2007, Stüben	ZFMK-DNA-JJ0314, ZFMK-TIS-cE0273	GU988283 GU987866
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, La Gomera, 3,5 km NW Hermigua; N28°11'18" W17°12'27", 410m; Euphorbia obtusifolia, 2004, Stüben	ZFMK-DNA-JJ0158, ZFMK-TIS-cC0140	GU988222 GU987805
Dendroacalles poneli (Stüben 2000); DENpon	SPAIN: Canary Islands, Tenerife, Teno Mts. 8 km NW Santiago del Teide, Los Carrizales; N28°19'14" W16°52'03", 370m; Euphorbia atropurpurea, 2004, Stüben	ZFMK-DNA-JJ0142, ZFMK-TIS-cC0139	GU988216 GU987799
Dendroacalles ruteri (Roudier 1954); DENrut	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts., Monte del Agua, Chupadero; N28°19'23" W16°49'12", 940m; Myrica faya, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0778, ZFMK-TIS-cE815	GU988526 GU988087
Dendroacalles ruteri (Roudier 1954); DENrut	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts., forest Las Mercedes; N28°31'49" W16°17'16", 889m; Erica arborea, 2008, Floren & Machado	ZFMK-DNA-JJ0780, ZFMK-TIS-cE819	GU988528 GU988089
Dendroacalles ruteri (Roudier 1954); DENrut	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0641, ZFMK-TIS-cE714	GU988452 GU988015
Dendroacalles ruteri (Roudier 1954); DENrut	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; Ocotea foetens, 2008, Astrin & Stüben	ZFMK-DNA-JJ0647, ZFMK-TIS-cE720	GU988455 GU988018
Dendroacalles ruteri (Roudier 1954); DENrut	SPAIN: Canary Islands, La Palma, 3 km SE Garafía, Montaña de las Varas; N28°49'11" W17°54'48", 919m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0107, ZFMK-TIS-cC0132	EU286306 EU286471
Dendroacalles sigma (Wollaston 1864); DENsig	SPAIN: Canary Islands, La Palma, 4,5 km E Garafía, 2 km S Don Pedro; N28°49'38" W17°53'46", 708m; laurisilva, Juglans, 2006, Stüben	ZFMK-DNA-JJ0493, ZFMK-TIS-cE554	FJ716510 FJ716560
Dichromacalles albopictus (Jacquet 1887); DICalb	FRANCE: Alpes-de-Hautes-Provence, 11 km NE Castellane, near Soleilhas, Col de St. Barnabé; N43°51'55" E06°37'52", 1368m; Helleborus, broom, 2007, Stüben	ZFMK-DNA-JJ0421, ZFMK-TIS-cF450	GU988328 GU987900
Dichromacalles albopictus (Jacquet 1887); DICalb	FRANCE: Alpes-Maritimes, 5 km S Sospel, Mont Razét; N43°50'59" E07°28'28", 1269m; Quercus ilex, Helleborus, broom, 2007, Stüben	ZFMK-DNA-JJ0418, ZFMK-TIS-cF447	FJ716493 FJ716544
Dichromacalles creticus (Reitter 1916); DICrt	GREECE: Kreta W, Omalos; N35°20'44" E23°54'38"; Cichorium spin., 2006, Bahr & Bayer	ZFMK-DNA-JJ0084, ZFMK-TIS-cGR0130	EU286298 EU286463
Dichromacalles diocletianus (Germa 1817); DICdio	SPAIN: Andalusien, Costa de la Luz, Barbate, 2008, Müller	ZFMK-DNA-JJ0529, ZFMK-TIS-cE590	GU988384 GU987944
Dichromacalles diocletianus (Germa 1817); DICdio	SPAIN: Cádiz, 6,5 km S Algeciras, Punta del Carnero; N36°04'35" W05°25'46", 34m; Olea, Pistacia lentiscus, thistle, 2007	ZFMK-DNA-JJ0178, ZFMK-TIS-cE0204	EU286336 EU286500
Dichromacalles	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto	ZFMK-DNA-JJ0751,	GU988508

diocletianus (Germar 1817); DICdio	Higuerón, Cortijo Los Puertos; Cynara alba, 2008, Torres	ZFMK-TIS-cE782	GU988068
Dichromacalles diocletianus (Germar 1817); DICdio	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuerón, Cortijo Los Puertos; Cynara, 2008, Torres	ZFMK-DNA-JJ0759, ZFMK-TIS-cE793	GU988514 GU988074
Dichromacalles diocletianus (Germar 1817); DICdio	FRANCE: Dép. Vaucluse, Avignon, near Montfavet; N43°56'15" E04°51'17", 22m; Carduus pycnocephalus, 2009, Stüben	ZFMK-DNA-JJ0906, ZFMK-TIS-cF934	GU988604 GU988158
Dichromacalles diocletianus (Germar 1817); DICdio	FRANCE: Dép. Vaucluse, Avignon, near Montfavet; N43°56'20" E04°50'47", 31m; Picris echinoides??, 2009, Stüben	ZFMK-DNA-JJ0895, ZFMK-TIS-cF933	GU988595 GU988152
Dichromacalles diocletianus (Germar 1817); DICdio	ITALY: Calabria, Monti di Orsomarso, 7 km SW Orsomarso, near Marcellina; N39°46'17" E15°50'17", 35m, 2008, Stüben	ZFMK-DNA-JJ0587, ZFMK-TIS-cl648	GU987986
Dichromacalles diocletianus (Germar 1817); DICdio	MOROCCO: W Sebta, vir. Punta Leona; N35°54'22" W05°28'55", 29m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0880, ZFMK-TIS-cMo925	GU988590 GU988149
Dichromacalles dromedarius (Boheman 1844); DICdro	SPAIN: Cádiz, 10 km NW Tarifa, Punta Palomas; N36°03'47" W05°42'04", 14m; Pistacia lentiscus, broom, 2007	ZFMK-DNA-JJ0201, ZFMK-TIS-cE0208	EU286353 EU286517
Dichromacalles dromedarius (Boheman 1844); DICdro	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte, Levada; N28°21'35" W16°52'05", 230m; Sonchus, Foeniculum vulgare, 2008, Astrin & Stüben	ZFMK-DNA-JJ0635, ZFMK-TIS-cE708	GU988450 GU988012
Dichromacalles dromedarius (Boheman 1844); DICdro	SPAIN: Cádiz, La Línea, Playa Levante, Sobrevela near Asansull (school), Eucaliptus, 2008, Torres	ZFMK-DNA-JJ0761, ZFMK-TIS-cE796	GU988516 GU988076
Dichromacalles dromedarius (Boheman 1844); DICdro	MOROCCO: W Sebta, vir. Punta Leona; N35°54'22" W05°28'55", 29m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0862, ZFMK-TIS-cE905	GU988582 GU988142
Dichromacalles dromedarius (Boheman 1844); DICdro	PORTUGAL: Madeira, 1 km NE Machico, Pico do Facho; N32°43'33" W16°45'34", 212m; Tolpis succulenta, 2008, Stüben	ZFMK-DNA-JJ0451, ZFMK-TIS-cP515	GU988344 GU987917
Dichromacalles dromedarius (Boheman 1844); DICdro	SPAIN: Canary Islands, La Palma, 7,5 km E Garafía, Bco. de los Hombres; N28°49'50" W17°52'03", 386m; Sonchus hierrensis, 2006, Stüben	ZFMK-DNA-JJ0104, ZFMK-TIS-cC0127	EU286304 EU286469
Dichromacalles dromedarius (Boheman 1844); DICdro	SPAIN: Cádiz, N La Línea, Torre Carbonera; N36°13'47" W05°19'03", 8m; Ulex, thistle, Pistatia, Acacia, 2009, Stüben	ZFMK-DNA-JJ0741, ZFMK-TIS-cE771	GU988502 GU988062
Dichromacalles lentisci (Chevrolat 1861); DIClen	SPAIN: Cádiz, Estación San Roque, near photovoltaics factory, at Río Guadarranque, 2008, Torres	ZFMK-DNA-JJ0750, ZFMK-TIS-cE781	GU988507 GU988067
Dichromacalles lentisci (Chevrolat 1861); DIClen	SPAIN: Cádiz, Estación San Roque, near photovoltaics factory, at Río Guadarranque; Foeniculum vulgare, 2008, Torres	ZFMK-DNA-JJ0754, ZFMK-TIS-cE786	GU988510 GU988070
Dichromacalles lentisci (Chevrolat 1861); DIClen	MOROCCO: W Sebta, vir. Punta Leona; N35°54'22" W05°28'55", 29m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0861, ZFMK-TIS-cE904	GU988581 GU988141
Dichromacalles querilhaci (H. Brisout de Barneville 1864); DICque	SPAIN: Granada, Sierra Nevada N.P., Solynieve; 2600m, 2003, Kresl	ZFMK-DNA-JJ0907, ZFMK-TIS-cE936	GU988605
Dichromacalles querilhaci (H. Brisout de Barneville 1864); DICque	FRANCE: Dép. Tarn, E Albi, Cahuzaguet (river Tarn); N43°55'59" E02°15'17", 176m; Andryala integrifolia, 2009, Stüben	ZFMK-DNA-JJ0896, ZFMK-TIS-cF935	GU988596 GU988153
Dichromacalles rolletii (Germar 1824); DICrol	FRANCE: Alpes-Maritimes, 8 km E Nizza, between Eze Village and Eze sur Mer; N43°43'46" E07°21'40", 343-100m; Euphorbia dendroides, 2008, Stüben	ZFMK-DNA-JJ0423, ZFMK-TIS-cF452	GU988329 GU987901
Dichromacalles rolletii (Germar 1824); DICrol	ITALY: Sicilia (ME), 2 km N San Fratello, P.N. dei Nebrodi; N38°01'59" E14°35'56", 700m; Euphorbia dendroides, 2005, Stüben	ZFMK-DNA-JJ0106, ZFMK-TIS-cl0129	EU286305 EU286470
Dichromacalles rolletii (Germar 1824); DICrol	ITALY: Sicilia (PA), Mt. Madonna di Alto 3 km N Castellana Sicula, P.R. Madonie; N37°48'32" E14°02'24", 950m; Euphorbia myrsinites, 2005, Stüben	ZFMK-DNA-JJ0316, ZFMK-TIS-cl0276	GU988284 GU987867
Dichromacalles tuberculatus (Rosenhauer 1856); DICtub	SPAIN: Cádiz, 6,5 km S Algeciras, Punta del Carnero, N36°04'35" W05°25'46", 34m; Olea, Pistacia lentiscus, thistle, 2007	ZFMK-DNA-JJ0199, ZFMK-TIS-cE0203	EU286351 EU286515
Dichromacalles tuberculatus (Rosenhauer 1856); DICtub	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuerón, Cortijo Los Puertos; Cynara alba, 2008, Torres	ZFMK-DNA-JJ0752, ZFMK-TIS-cE783	GU988509 GU988069
Dichromacalles tuberculatus (Rosenhauer 1856); DICtub	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuerón, Cortijo Los Puertos; Cynara, 2008, Torres	ZFMK-DNA-JJ0757, ZFMK-TIS-cE791	GU988512 GU988072
Dichromacalles tuberculatus	MOROCCO: W Sebta, vir. Punta Leona; N35°54'22" W05°28'55", 29m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0860, ZFMK-TIS-cE903	GU988580 GU988140

(Rosenhauer 1856); DICtub Dichromacalles tuberculatus (Rosenhauer 1856); DICtub	SPAIN: Cádiz, NW Tarifa, Sierra de Fates; N36°03'53" W05°38'58", 78m; Quercus suber, Ulex, 2009, Stüben	ZFMK-DNA-JJ0743, ZFMK-TIS-cE773	GU988504 GU988064
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	GREECE: Epirus, 19 km E Igoumenitsa, Petrovitsa; N39°33'30" E20°28'12", 355m; Arbutus/Platanus, 2007, Stüben	ZFMK-DNA-JJ0237, ZFMK-TIS-cEP0398	GU213522 GU213657
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	GREECE: Epirus, 9 km SW Metsovo, Mikro Peristeri; N39°45'03" E21°05'09", 693m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0342, ZFMK-TIS-cEP0390	GU213544 GU213679
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	GREECE: Korfu, 15 km N Kerkyra, Mt. Pantokratoras, Paelo Chorio; N39°44'43" E19°53'44", 419m; Quercus ilex, Fagus, 2007, Stüben	ZFMK-DNA-JJ0705, ZFMK-TIS-cKO0374	GU988481 GU988043
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	GREECE: Korfu, 20 km NW Kerkyra, Vistonas; N39°41'55" E19°41'46", 404m; Quercus ilex, Olea, 2007, Stüben	ZFMK-DNA-JJ0232, ZFMK-TIS-cKO0367	GU213518 GU213653
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	ITALY: Basilicata, Monte Pollino, 4 km SE Rotonda, Zarafa; N39°56'33" E16°04'28", 677m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0580, ZFMK-TIS-cl641	GU988420 GU987981
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	ITALY: Basilicata, Monte Pollino, 9 km NW Rotonda, Castelluccio-Sup.; N40°00'37" E15°57'59", 653m; Quercus, Castanea, 2008, Stüben	ZFMK-DNA-JJ0585, ZFMK-TIS-cl646	GU213577 GU213712
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	ITALY: Campania, 4 km S Cava de Tirreni (Salerno), Vietri sul Mare; N40°40'18" E14°43'14", 106m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0590, ZFMK-TIS-cl651	GU213578 GU213713
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	ITALY: Campania, Cilento, 14 km SW Vallo d. Lucania, Marina di Ascea; N40°07'42" E15°10'53", 13m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0568, ZFMK-TIS-cl629	GU213576 GU213711
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	ITALY: Sicilia (PA), 19 km SE Bagheria; Monti di Calamigna, NE Ventimiglia di Sicilia; N37°55'33" E13°35'48", 581m; Quercus ilex, 2006, Stüben	ZFMK-DNA-JJ0187, ZFMK-TIS-cl0298	EU286341 EU286505
Echinodera (Ruteria) bellieri (Reiche 1860); ECHbel	ITALY: Sicilia (TP), 19 km NE Trapani, Castelluzzo; N38°06'01" E12°42'25", 47m; Quercus ilex, 2006, Stüben	ZFMK-DNA-JJ0138, ZFMK-TIS-cl0173	GU213511 GU213646
Echinodera (Ruteria) cognita Stüben 2006; ECHcog	SPAIN: Andalucía, S. Mágina, 6 km S Torres; N37°43'54" W03°29'45", 1641m; Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0245, ZFMK-TIS-cE0417	GU213527 GU213662
Echinodera (Ruteria) cognita Stüben 2006; ECHcog	SPAIN: Andalucía, S. Mágina, 6 km S Torres; N37°43'54" W03°29'45", 1641m; Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0385, ZFMK-TIS-cE490	GU213549 GU213684
Echinodera (Ruteria) graeca Caldara 1973; ECHgrc	GREECE: Epirus, N Metsovo, Katara Pass; N39°46'59" E21°09'09", 1419m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0337, ZFMK-TIS-cEP0384	GU213542 GU213677
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	CZECH REPUBLIC: W Bohemia (KT), Balkovy, Doubrava Hill (6545), 2008, Kresl	ZFMK-DNA-JJ0766, ZFMK-TIS-cCz800	GU213606 GU213741
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	FRANCE: Isère, 12 km SW Bourgoin, NE St. Jean de Bourmay; N45°31'02" E05°10'23", 395m; Quercus, Castanea, 2005, Stüben	ZFMK-DNA-JJ0169, ZFMK-TIS-cl0014	GU213512 GU213647
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	FRANCE: Isère, 22 km S Bourgoin, La Cote St. André; N45°24'04" E05°14'04", 469m; Castanea, 2005, Stüben	ZFMK-DNA-JJ0048, ZFMK-TIS-cl0004	GU988188 GU987778
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'13", 719m; Quercus, 2005, Stüben	ZFMK-DNA-JJ0027, ZFMK-TIS-cl0022	GU988173 GU987763
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	GERMANY: Rheinland-Pfalz, Ahrtal, Mayschoß; N50°31'03" E07°01'03", 200m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0030, ZFMK-TIS-cM0067	GU988176 GU987766
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	GERMANY: Rheinland-Pfalz, Bausenberg near Niederzissen; N50°27'52" E07°13'29", 291m; Quercus, Carpinus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0170, ZFMK-TIS-cM0064	GU213513 GU213648
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	GERMANY: Rheinland-Pfalz, Moseltal, 5 km E Cochem; N50°08'46" E07°12'39", 279m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0031, ZFMK-TIS-cM0047	EU286287 EU286452
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	CROATIA: Dalmatien, 6 km E Karlobag, Velebit Mts., Ostarijska vrata (Pass); N44°31'45" E15°08'34", 927m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0205, ZFMK-TIS-cHR0335	EU286356 EU286520
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	CROATIA: Dalmatien, 8 km E Karlobag, Velebit Mts., Stupacinovo; N44°32'41" E15°09'58", 1049m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0329, ZFMK-TIS-cHR0337	GU213541 GU213676
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	FRANCE: Alpes-Maritimes, 9 km N Sospel, N Moulinet; N43°57'58" E07°24'55", 1111m; Castanea sativa, 2007, Stüben	ZFMK-DNA-JJ0884, ZFMK-TIS-cF437	GU213631 GU213765
Echinodera (Ruteria) hypocrita (Boheman	FRANCE: Dép. Indre-et-Loire, E Tours, Vouvray (near Loire river); N47°24'35" E00°46'03", 62m;	ZFMK-DNA-JJ0889, ZFMK-TIS-cF939	GU213634 GU213768

1837); ECHhyp	Quercus, 2009, Stüben		
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	GERMANY: Baden-W., Kaiserstuhl, "Auf dem Eck"; N48°06'32" E07°40'04", 432m; Fagus, Carpinus, Quercus, 2006, Stüben	ZFMK-DNA-JJ0324, ZFMK-TIS-cD0304	GU213538 GU213673
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	GREECE: Epirus, 10 km N Metsovo; N39°50'02" E21°11'28", 1465m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0339, ZFMK-TIS-cEP0386	GU213543 GU213678
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0566, ZFMK-TIS-cl627	GU213575 GU213710
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	ITALY: Campania, Cilento, 7 km SW Vallo d. Lucania, Petrosa; N40°11'30" E15°12'14", 110m; Quercus, Pistacia lentiscus, 2008, Stüben	ZFMK-DNA-JJ0558, ZFMK-TIS-cl619	GU988404 GU987964
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	CZECH REPUBLIC: Moravia mer., Pavlov env, Pálava Protected Landscape Area; Tilia, Carpinus, Quercus, 2006, Stejskal	ZFMK-DNA-JJ0323, ZFMK-TIS-cCZ0302	GU213537 GU213672
Echinodera (Ruteria) hypocrita (Boheman 1837); ECHhyp	SLOVENIA: Apasko Polje, Podgorje env., 30 km NE of Maribor; Quercus, Carpinus, 2006, Stejskal	ZFMK-DNA-JJ0088, ZFMK-TIS-cSLO0172	GU988203 GU987788
Echinodera (Ruteria) incognita (Hoffmann 1956); ECHinc	SPAIN: Albacete, Yeste, Los Prados; N38°20'47" W02°26'32", 1148m; Juglans regia, Quercus ilex, Rubus, 2008	ZFMK-DNA-JJ0533, ZFMK-TIS-cE594	GU213574 GU213709
Echinodera (Ruteria) incognita (Hoffmann 1956); ECHinc	SPAIN: Andalucía, S. de Segura (S. del Pozo), 12 km SE Cazorla; N37°52'53" W02°52'39", 1300m; Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0384, ZFMK-TIS-cE489	GU213548 GU213683
Echinodera (Ruteria) incognita (Hoffmann 1956); ECHinc	SPAIN: Castilla-La Mancha, S. de Alcaraz, 12 km SE Alcaraz, nr. Mt. Almenara; N38°34'17" W02°25'53", 1650m; Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0246, ZFMK-TIS-cE0418	GU213528 GU213663
Echinodera (Ruteria) incognita (Hoffmann 1956); ECHinc	SPAIN: Málaga, NE Málaga, Sierra de Tejeda, Canillas de Aceituno; N36°52'25" W04°03'42", 641m; Quercus ilex, 2009, Stüben	ZFMK-DNA-JJ0735, ZFMK-TIS-cE763	GU213602 GU213737
Echinodera (Ruteria) incognita (Hoffmann 1956); ECHinc	SPAIN: Málaga, NE Málaga, Sierra de Tejeda, Comares, N36°50'38" W04°14'39", 499m; Olea, Ceratonia siliqua, 2009, Stüben	ZFMK-DNA-JJ0733, ZFMK-TIS-cE762	GU213601 GU213736
Echinodera (Ruteria) major (A. & F. Solari 1907); ECHmaj	CROATIA: Dalmatien, 15 km NW Split, Kozjak Mts., Radosic; N43°36'31" E16°19'43", 240m; Olea, Quercus, Carpinus, 2007, Stüben	ZFMK-DNA-JJ0325, ZFMK-TIS-cHR0306	GU213539 GU213674
Echinodera (Ruteria) major (A. & F. Solari 1907); ECHmaj	CROATIA: Dalmatien, 3 km NE Makarska, Biokovo Mts., "Vosac"; N43°18'53" E17°03'09", 1367m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0328, ZFMK-TIS-cHR0329	GU213540 GU213675
Echinodera (Ruteria) major (A. & F. Solari 1907); ECHmaj	CROATIA: Dalmatien, 7 km N Makarska, Biokovo Mts., Bast; N43°21'26" E16°59'18", 415m; Quercus, 2007, Stüben	ZFMK-DNA-JJ0204, ZFMK-TIS-cHR0319	EU286355 EU286519
Echinodera (Ruteria) minosi Bahr & Bayer 2005; ECHmii	GREECE: Kreta W, Levka Ori, Imbros, above Imbros Gorge; N35°14'51" E24°10'30", 900m; Quercus, 2006, Bahr & Bayer	ZFMK-DNA-JJ0085, ZFMK-TIS-cGR0150	EU286299 EU286464
Echinodera (Ruteria) minosi Bahr & Bayer 2005; ECHmii	GREECE: Kreta W, Levka Ori, Imbros, above the Imbros Gorge; N35°14'51" E24°10'30", 900m; Quercus, 2006, Bahr & Bayer	ZFMK-DNA-JJ0123, ZFMK-TIS-cGR0150	GU213509 GU213644
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	PORTUGAL: Manteigas; N40°23'13" W07°32'06", 945m; Quercus, 2008	ZFMK-DNA-JJ0441, ZFMK-TIS-cP541	GU988338 GU987910
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	PORTUGAL: NW Lisboa, Sintra; N38°47'40" W09°23'10", 269m; Acer, Laurus, Hedera, 2009	ZFMK-DNA-JJ0822, ZFMK-TIS-cE864	GU988555 GU988116
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	PORTUGAL: Sa. Arrábida, SW Setúbal; N38°28'13" W09°00'07", 311m; Quercus ilex, Smilax, 2009	ZFMK-DNA-JJ0821, ZFMK-TIS-cE863	GU988554 GU988115
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	PORTUGAL: Sa. Arrábida, SW Setúbal; N38°30'40" W08°55'21", 51m; Quercus ilex, Pistacia lentiscus, Phillyrea, Smilax, 2009	ZFMK-DNA-JJ0820, ZFMK-TIS-cE862	GU213615 GU213750
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	PORTUGAL: Sa. Estrela, near Manteigas; N40°23'13" W07°32'06", 946m; Quercus pyrenaica, Cytisus multiflorus, Ruscus, 2009	ZFMK-DNA-JJ0816, ZFMK-TIS-cE858	GU988552 GU988113
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	PORTUGAL: Sa. Estrela, SW Manteigas; N40°18'45" W07°35'03", 1558m; Cytisus, 2009	ZFMK-DNA-JJ0813, ZFMK-TIS-cE855	GU213612 GU213747
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Ávila, NW Arenas de San Pedro, Gredos NP, "la plataforma"; N40°16'06" W05°14'22", 1880m; Cytisus spp., 2009	ZFMK-DNA-JJ0804, ZFMK-TIS-cE846	GU213610 GU213745
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Ávila, SW Ávila, N San Martín de la Vega, Pto. de Chía; N40°27'16" W05°10'16", 1718m; Cytisus, 2009	ZFMK-DNA-JJ0800, ZFMK-TIS-cE842	GU988541 GU988102
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Ávila, SW Ávila, Navacepedilla de Corneja; N40°28'59" W05°11'08", 1267m; Cytisus, Crategus, Rubus, Quercus, 2009	ZFMK-DNA-JJ0798, ZFMK-TIS-cE840	GU988539 GU988100

Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Ávila, SW Ávila, near Mengamuñoz, Pto. de Menga; N40°28'40" W05°00'40", 1564m; Cytisus, 2009	ZFMK-DNA-JJ0796, ZFMK-TIS-cE838	GU988537 GU988098
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Ávila, SW Ávila, SE Piedrahita, Pto. de la Peña Negra; N40°25'19" W05°18'01", 1910m; Cytisus, 2009	ZFMK-DNA-JJ0801, ZFMK-TIS-cE843	GU988542 GU988103
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Cáceres, NE Plasencia, S Hervás, Pto. de Honduras; N40°13'17" W05°52'19", 1436m; Cytisus, 2009	ZFMK-DNA-JJ0818, ZFMK-TIS-cE860	GU213613 GU213748
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Madrid, N Colmenar Viejo, Pto. de Navafria; N40°59'00" W03°49'02", 1762m; Cytisus, 2009	ZFMK-DNA-JJ0795, ZFMK-TIS-cE837	GU988536 GU988097
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Madrid, NW Colmenar Viejo, Pto. de Cotos – Valdesqui; N40°48'54" W03°57'33", 1784m; Cytisus, 2009	ZFMK-DNA-JJ0792, ZFMK-TIS-cE834	GU213609 GU213744
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Salamanca, NW Béjar, near Herguijuela de la Sierra; N40°27'05" W06°04'45", 807m; Fagus, Castanea, Alnus, 2009	ZFMK-DNA-JJ0809, ZFMK-TIS-cE851	GU988547 GU988108
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Salamanca, NW Béjar, NW Monforte de la Sierra, Peña de Francia, near cloister; N40°31'01" W06°10'15", 1636m; Cytisus, 2009	ZFMK-DNA-JJ0808, ZFMK-TIS-cE850	GU213611 GU213746
Echinodera (Ruteria) paganettii (F. Solari 1952); ECHpag	SPAIN: Cáceres, 27 km N Plasencia, Montes de Tras la Sierra, Puerto de Honduras; N40°13'17" W05°52'19", 1437m; Cytisus, 2004, Stüben	ZFMK-DNA-JJ0381, ZFMK-TIS-cE486	GU988314 GU987888
Echinodera adriatica Stüben 2008; ECHadr	CROATIA: Dalmatien, 21 km E Split, Mosor Mts, N Omis, Gata; N43°27'59" E16°41'40", 280m; Olea, Quercus, Carpinus, 2007, Stüben	ZFMK-DNA-JJ0227, ZFMK-TIS-cHR0311	GU213516 GU213651
Echinodera adriatica Stüben 2008; ECHadr	CROATIA: Dalmatien, 35 km E Split, Mosor Mts, E Omis, N Slime; N43°25'46" E16°51'59", 69m; Cetina, Robinia, 2007, Stüben	ZFMK-DNA-JJ0327, ZFMK-TIS-cHR0328	GU988286 GU987869
Echinodera adriatica Stüben 2008; ECHadr	CROATIA: Dalmatien, 7 km N Makarska, Biokovo Mts., Bast; N43°21'26" E16°59'18", 415m; Quercus, 2007, Stüben	ZFMK-DNA-JJ0228, ZFMK-TIS-cHR0318	GU213517 GU213652
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, 10 km NW Tarifa, Punta Palomas; N36°03'47" W05°42'04", 14m; Pistacia lentiscus, broom, 2007	ZFMK-DNA-JJ0269, ZFMK-TIS-cE0207	GU988250 GU987833
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, 10 km SW Algeciras, El Bujeco; N36°04'10" W05°31'48", 257m; Quercus suber, 2007	ZFMK-DNA-JJ0200, ZFMK-TIS-cE0205	EU286352 EU286516
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Málaga, 11 km NW Estepona, Sierra Crestellina, Casares; N36°27'06" W05°16'39", 359m; Pistacia lentiscus, Olea, Smilax, 2007	ZFMK-DNA-JJ0270, ZFMK-TIS-cE0209	GU988251 GU987834
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Málaga, 16 km N Estepona, Sierra Bermeja, Jubrique; N36°33'49" W05°12'27", 557m; Quercus suber, 2007	ZFMK-DNA-JJ0273, ZFMK-TIS-cE0212	GU213532 GU213667
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto del Higuieron, Cortijo los Puertos, Pistacia lentiscus, 2008, Torres	ZFMK-DNA-JJ0762, ZFMK-TIS-cE795	GU988517 GU988077
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuieron, Cortijo Los Puertos; Chamaerops humilis, 2008, Torres	ZFMK-DNA-JJ0760, ZFMK-TIS-cE794	GU988515 GU988075
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuieron, Cortijo Los Puertos; Cynara, 2008, Torres	ZFMK-DNA-JJ0758, ZFMK-TIS-cE792	GU988513 GU988073
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, San Roque, Pinar Rey, entry to Fuente Alhaja; Populus nigra, 2008, Torres	ZFMK-DNA-JJ0749, ZFMK-TIS-cE780	GU213605 GU213740
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, N La Línea, Torre Carbonera; N36°13'47" W05°19'03", 8m; Ulex, thistle, Pistacia, Acacia, 2009, Stüben	ZFMK-DNA-JJ0740, ZFMK-TIS-cE770	GU988501 GU988061
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Cádiz, NW La Línea, Castellar (Almoraima); N36°18'23" W05°26'30", 12m; Quercus suber, 2009, Stüben	ZFMK-DNA-JJ0742, ZFMK-TIS-cE772	GU988503 GU988063
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Málaga, NW Estepona, Casares, Sierra Bermeja; N36°27'03" W05°15'56", 377m; Quercus suber, Pistacia, 2009, Stüben	ZFMK-DNA-JJ0732, ZFMK-TIS-cE764	GU988495 GU988055
Echinodera andalusiensis Stüben 2003; ECHand	SPAIN: Málaga, W Estepona; N36°25'57" W05°14'42", 189m; Quercus, Ceratonia, Pistacia, 2009, Stüben	ZFMK-DNA-JJ0736, ZFMK-TIS-cE765	GU988497 GU988057
Echinodera angulipennis Wollaston 1864; ECHang	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Las Mercedes; N28°31'49" W16°17'12", 905m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0617, ZFMK-TIS-cE690	GU213580 GU213715
Echinodera angulipennis Wollaston 1864; ECHang	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts. near Masca; N28°18'27" W16°50'29", 668m; Ficus carica, Citrus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0630, ZFMK-TIS-cE703	FJ716522 FJ716571
Echinodera angulipennis Wollaston 1864; ECHang	SPAIN: Canary Islands, Tenerife, 2 km NE Icod, Sta. Barbara; N28°21'41" W16°41'00", 561m, 2003, Stüben	ZFMK-DNA-JJ0498, ZFMK-TIS-cE559	GU213566 GU987933
Echinodera angulipennis Wollaston 1864; ECHang	SPAIN: Canary Islands, Tenerife, East Anaga Mts, E La Laguna, E Lomo de las Bodegas; N28°33'38"	ZFMK-DNA-JJ0499, ZFMK-TIS-cE560	GU988369 GU987934

	W16°09'20", 500m, 2003, Stüben		
Echinodera ariadnae Bahr & Bayer 2005; ECHari	GREECE: Kreta W, Levka Ori, Imbros, above the Imbros Gorge; N35°14'51" E24°10'30", 900m; Quercus, 2006, Bahr & Bayer	ZFMK-DNA-JJ0124, ZFMK-TIS-cGR0151	EU286314 EU286479
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Basilicata (5330), Mass. Pollino, Jazzicelli; 840m; Quercus, 2002, Kapp	ZFMK-DNA-JJ0241, ZFMK-TIS-cl0415	GU988239 GU987822
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Calabria (RC), P.N. dell'Aspromonte, 4 km SE Gambarie; N38°08'49" E15°51'40", 1700m; PARATYPUS, Fagus, 2002, Behne	ZFMK-DNA-JJ0878, ZFMK-TIS-cE923	GU988589
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Calabria (RC), P.N. dell'Aspromonte, 7 km SE Gambarie; N38°06'46" E15°52'00", 1600m; PARATYPUS, Fagus, 2002, Behne	ZFMK-DNA-JJ0879, ZFMK-TIS-cE924	GU213630
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Abruzzo, 28 km SE Pescara, S. Vito; N42°17'30" E14°27'35", 79m; Quercus, 2008, Stüben	ZFMK-DNA-JJ0599, ZFMK-TIS-cl660	GU988430 GU987992
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Abruzzo, P.N. Majella, Caramanico TermFiume Orfento; N42°09'48" E14°00'17", 511m, 2008, Stüben	ZFMK-DNA-JJ0600, ZFMK-TIS-cl661	GU213579 GU213714
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Basilicata, Monte Pollino, 17 km N Rotonda, N Episcopia; N40°05'55" E16°07'13", 894m; Quercus, Castanea, 2008, Stüben	ZFMK-DNA-JJ0586, ZFMK-TIS-cl647	GU988424 GU987985
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Basilicata, Monte Pollino, 4 km SE Rotonda, Zarafa; N39°56'33" E16°04'28", 677m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0581, ZFMK-TIS-cl642	GU988421 GU987982
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Basilicata, Monte Pollino, 9 km E Rotonda, Timpa d. Demonio; N39°57'31" E16°08'39", 1254m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0579, ZFMK-TIS-cl640	GU988419 GU987980
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Basilicata, Monte Pollino, 9 km NW Rotonda, Castelluccio-Sup.; N40°00'37" E15°57'59", 653m; Quercus, Castanea, 2008, Stüben	ZFMK-DNA-JJ0584, ZFMK-TIS-cl645	GU988423 GU987984
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Calabria (RC), P.N. dell'Aspromonte, 3 km NNE Gambarie; N38°11'31" E15°50'43", 1200m; Fagus, Alnus, Ilex, 2002, Stüben	ZFMK-DNA-JJ0478, ZFMK-TIS-cl494	GU988354
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Calabria, Monti di Orsomarso, 3 km N Orsomarso, near Timpone Garramillo; N39°49'36" E15°55'31", 751m; Fagus, Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0588, ZFMK-TIS-cl649	GU988425 GU987987
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Campania, 4 km S Cava de Tirreni (Salerno), Vietri sul Mare; N40°40'18" E14°43'14", 106m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0891, ZFMK-TIS-cl652	GU213635 GU213769
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Campania, Cilento, 14 km SW Vallo d. Lucania, Marina di Ascea; N40°07'42" E15°10'53", 13m; Quercus ilex, 2008, Stüben	ZFMK-DNA-JJ0570, ZFMK-TIS-cl631	GU988413 GU987973
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Campania, Cilento, 7 km SW Vallo d. Lucania, Petrosa; N40°11'30" E15°12'14", 110m; Quercus, Pistacia lentiscus, 2008, Stüben	ZFMK-DNA-JJ0559, ZFMK-TIS-cl620	GU988405 GU987965
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Campania, Monti Picentini, 4 km E Acerno; N40°44'17" E15°05'43", 831m; Fagus, Ilex, 2008, Stüben	ZFMK-DNA-JJ0571, ZFMK-TIS-cl632	GU988414 GU987974
Echinodera aspromontensis Stüben 2008; ECHasp	ITALY: Campania, Monti Picentini, 4 km E Acerno; N40°44'17" E15°05'43", 831m; Fagus, Ilex, 2008, Stüben	ZFMK-DNA-JJ0572, ZFMK-TIS-cl633	GU988415 GU987975
Echinodera atlasensis Stüben 2001; ECHatI	MOROCCO: Anti-Atlas, 46 km E Tiznit, Anezi, "El Tnine"; N29°44'51" W09°15'26", 1200m, 2002, Stüben	ZFMK-DNA-JJ0898, ZFMK-TIS-cMo947	GU213637 GU213771
Echinodera atlasensis Stüben 2001; ECHatI	MOROCCO: N Agadir, Tifrit - Immouizzer; N30°39'23" W09°30'09", 1162m; Ceratonia, Quercus, 2009, Stüben	ZFMK-DNA-JJ0875, ZFMK-TIS-cE919	GU213628 GU213763
Echinodera atlasensis Stüben 2001; ECHatI	MOROCCO: N Agadir, Tifrit; N30°35'57" W09°29'50", 641m; Olea, Smilax, 2009, Stüben	ZFMK-DNA-JJ0874, ZFMK-TIS-cE918	GU213627 GU213762
Echinodera bargouensis Stüben & Astrin 2011; ECHbar	TUNISIA: Dorsale, Jebel Bargou, 42 km NE Maktar; N36°02'10" E09°37'35", 610m; Rhamnus, Pistacia, Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0394, ZFMK-TIS-cT499	GU213555 GU213690
Echinodera bargouensis Stüben & Astrin 2011; ECHbar	TUNISIA: Jebel Serj, 25 km E Makta; N35°55'29" E09°28'41", 670m; Smilax aspera, Salix, Ficus, Ceratonia, 2003, Stüben	ZFMK-DNA-JJ0897, ZFMK-TIS-cTU946	GU213636 GU213770
Echinodera brachati Wolf 2002; ECHbra	GREECE: Peloponnese, Mt. Taygetos W, Saidona E; N36°52'59" E22°17'25", 800m; Quercus, Onosma, Zistrose, Salvia fruticosa, broom, 2009, Bahr, Bayer, Brunner & Büche	ZFMK-DNA-JJ0877, ZFMK-TIS-cE922	GU213629 GU213764
Echinodera brisouti (Reitter 1885); ECHbar	GREECE: Epirus, 17 km E Igoumenitsa, Avaritsa; N39°32'31" E20°27'25", 96m; Quercus ilex, Platanus, 2007, Stüben	ZFMK-DNA-JJ0343, ZFMK-TIS-cEP0401	GU988294 GU987877
Echinodera brisouti (Reitter 1885); ECHbar	GREECE: Epirus, 9 km SW Metsovo, Mikro Peristeri; N39°45'03" E21°05'09", 693m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0236, ZFMK-TIS-cEP0391	GU213521 GU213656

Echinodera brisouti (Reitter 1885); ECHbar	GREECE: Korfu, 18 km N Kerkyra, Loutses, Megali Grava; N39°46'38" E19°53'21", 479m; Quercus pubescens, Laurus nobilis, Asphodelus, 2007, Stüben	ZFMK-DNA-JJ0233, ZFMK-TIS-cKO0370	FJ716489 FJ716541
Echinodera brisouti (Reitter 1885); ECHbar	GREECE: Korfu, 8 km S Kerkyra, M. Pantokratoras NW Makrata; N39°32'52" E19°52'59", 482m; Quercus, Arbutus, 2007, Stüben	ZFMK-DNA-JJ0235, ZFMK-TIS-cKO0383	GU213520 GU213655
Echinodera bulbosa Stüben & Astrin 2008; ECHbul	SPAIN: Almería, 11 km NW Laujar de Andarax, Sierra Nevada, Bayárcal; N37°02'27" W03°00'12", 1291m; Quercus ilex, broom, Euphorbia, 2007	ZFMK-DNA-JJ0224, ZFMK-TIS-cE0188	GU213514 GU213649
Echinodera bulbosa Stüben & Astrin 2008; ECHbul	SPAIN: Almería, 9 km W Laujar de Andarax, Sierra Nevada, Bayárcal; N37°00'54" W02°59'07", 1262m; Quercus ilex, broom, Euphorbia, 2007	ZFMK-DNA-JJ0258, ZFMK-TIS-cE0191	GU213530 GU213665
Echinodera bulbosa Stüben & Astrin 2008; ECHbul	SPAIN: Granada, 13 km W Laujar de Andarax, Sierra Nevada, Mairena nach Júbar; N37°00'29" W03°01'55", 1162m; Quercus ilex, Euphorbia, 2007, Stüben	ZFMK-DNA-JJ0260, ZFMK-TIS-cE0193	GU988243 GU987826
Echinodera capbonensis Stüben 2004; ECHcab	TUNISIA: 16 km E Maktar, beneath Haute Kesra; N35°47'51" E09°21'09", 1100m; Ficus, Grenadine, 2003, Stüben	ZFMK-DNA-JJ0398, ZFMK-TIS-cT503	GU988318 GU987890
Echinodera capbonensis Stüben 2004; ECHcab	TUNISIA: 6 km NW Bizerte, J. Nador; N37°19'04" E09°49'32", 60m; Quercus ilex, Pistacia, 2003, Stüben	ZFMK-DNA-JJ0350, ZFMK-TIS-cT455	GU213546 GU213681
Echinodera capbonensis Stüben 2004; ECHcab	TUNISIA: Cap Bon, 13 km NNE Soliman, Korbous; N36°47'37" E10°33'52", 30m; Quercus ilex, Smilax aspera, 2003, Stüben	ZFMK-DNA-JJ0527, ZFMK-TIS-cE588	GU213572 GU213707
Echinodera capbonensis Stüben 2004; ECHcab	TUNISIA: Cap Bon, 16 km NNE Soliman, Korbous; N36°49'46" E10°34'15", 40m; Garrigue, 2003, Stüben	ZFMK-DNA-JJ0397, ZFMK-TIS-cT502	GU988317 GU987889
Echinodera capiomonti (H. Brisout de Barneville 1864); ECHcap	ITALY: Emilia-Romagna, San Giovanni in Marignano, 10 km W Pésaro (RN); N43°56'06" E12°43'00", 100m; Quercus, 2001, Stüben	ZFMK-DNA-JJ0383, ZFMK-TIS-cl488	GU213547 GU213682
Echinodera capiomonti (H. Brisout de Barneville 1864); ECHcap	ITALY: Emilia-Romagna, San Giovanni in Marignano, 10 km W Pésaro (RN); N43°56'06" E12°43'00", 100m; Quercus, 2001, Stüben	ZFMK-DNA-JJ0475, ZFMK-TIS-cl488	GU213562
Echinodera casablancaensis Stüben 2001; ECHcas	MOROCCO: 2 km S Essaouira; N31°28'08" W09°45'27", 22m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0871, ZFMK-TIS-cE915	GU988588 GU988148
Echinodera casablancaensis Stüben 2001; ECHcas	MOROCCO: 2 km S Essaouira; N31°29'06" W09°45'41", 22m; Acacia, 2009, Stüben	ZFMK-DNA-JJ0872, ZFMK-TIS-cE916	GU213625 GU213760
Echinodera casablancaensis Stüben 2001; ECHcas	MOROCCO: 30 km SW Casablanca, 1 km E Dar-Bouazza, Strand; N33°32'15" W07°48'27", 5m; Acacia, 2001, Stüben	ZFMK-DNA-JJ0386, ZFMK-TIS-cM491	GU988315
Echinodera casablancaensis Stüben 2001; ECHcas	MOROCCO: 30 km SW Casablanca, 1 km E Dar-Bouazza; N33°32'15" W07°48'27", 5m; Acacia, 2001, Stüben	ZFMK-DNA-JJ0476, ZFMK-TIS-cM491	GU988353
Echinodera casablancaensis Stüben 2001; ECHcas	MOROCCO: S Tamri; N30°40'39" W09°51'55", 196m, 2009, Stüben	ZFMK-DNA-JJ0873, ZFMK-TIS-cE917	GU213626 GU213761
Echinodera casablancaensis Stüben 2001; ECHcas	MOROCCO: SW Casablanca, Dar Bouazza; N33°32'05" W07°47'17", 9m; Acacia, 2009, Stüben	ZFMK-DNA-JJ0870, ZFMK-TIS-cE913	GU213624 GU213759
Echinodera ceutaensis Stüben 2002; ECHceu	PORTUGAL: Sa. Arrábida, SW Setúbal; N38°30'40" W08°55'21", 51m; Quercus ilex, Pistacia lentiscus, Phillyrea, Smilax, 2009	ZFMK-DNA-JJ0819, ZFMK-TIS-cE861	GU213614 GU213749
Echinodera ceutaensis Stüben 2002; ECHceu	MOROCCO: 12 km NE Tanger; N35°49'08" W05°44'05", 18m; Pistacia, Quercus, 2009, Stüben	ZFMK-DNA-JJ0863, ZFMK-TIS-cE906	GU988583 GU988143
Echinodera ceutaensis Stüben 2002; ECHceu	MOROCCO: S Ksar-es-Seghir; N35°45'16" W05°30'49", 278m; Pistacia, Quercus suber, 2009, Stüben	ZFMK-DNA-JJ0865, ZFMK-TIS-cE908	GU988585 GU988145
Echinodera ceutaensis Stüben 2002; ECHceu	MOROCCO: W Sebta, vir. Biutz; N35°53'04" W05°24'08", 337m; Quercus suber, Smilax, Arbutus, 2009, Stüben	ZFMK-DNA-JJ0857, ZFMK-TIS-cE900	GU213621 GU213756
Echinodera ceutaensis Stüben 2002; ECHceu	MOROCCO: W Sebta, vir. Punta Leona; N35°54'22" W05°28'55", 29m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0859, ZFMK-TIS-cE902	GU988579 GU988139
Echinodera corcyrensis Stüben 2008; ECHcor	CROATIA: Dalmatien, 24 km W Split, 1 km E Marina, Poljica; N43°31'11" E16°08'31", 20m; Quercus, 2007, Stüben	ZFMK-DNA-JJ0226, ZFMK-TIS-cHR0307	GU213515 GU213650
Echinodera corcyrensis Stüben 2008; ECHcor	GREECE: Epirus, 19 km E Igoumenitsa, Petrovitsa; N39°33'30" E20°28'12", 355m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0238, ZFMK-TIS-cEP0409	GU213523 GU213658
Echinodera corcyrensis Stüben 2008; ECHcor	GREECE: Korfu, 20 kmNW Kerkyra, Makrades; N39°41'10" E19°41'31", 281m; Quercus ilex, Olea, 2007, Stüben	ZFMK-DNA-JJ0231, ZFMK-TIS-cKO0366	GU988238 GU987821
Echinodera corcyrensis Stüben 2008; ECHcor	GREECE: Korfu, 9 km SW Kerkyra, Kaisers'Thrones; N39°35'39" E19°49'17", 258m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0234, ZFMK-TIS-cKO0373	GU213519 GU213654
Echinodera crenata	SPAIN: Canary Islands, Tenerife, S Orotava, Orotava	ZFMK-DNA-JJ0637,	GU213584

Wollaston 1863; ECHcre	valley, Mirador de la Rosa; N28°20'25" W16°31'29", 1503m; Greenovia sp., Aeonium spathulatum, 2008, Astrin & Stüben	ZFMK-TIS-cE710	GU213719
Echinodera crenata Wollaston 1863; ECHcre	SPAIN: Canary Islands, Tenerife, S Orotava, Teide, Montaña Mostaza; N28°17'01" W16°34'18", 2172m; Spartocytisus supranubius, 2008, Astrin & Stüben	ZFMK-DNA-JJ0639, ZFMK-TIS-cE712	FJ716524 FJ716573
Echinodera crenata Wollaston 1863; ECHcre	SPAIN: Canary Islands, Tenerife, 7 km S Teide, Zapato de la Reina; N28°12'48" W16°39'44", 2035m; Spartocytisus supranubius, 2003, Stüben	ZFMK-DNA-JJ0504, ZFMK-TIS-cE565	GU213568 GU213702
Echinodera diottii Stüben 2010; ECHdit	ITALY: Trapani, Is. Pantelleria, Montagna Grande, 2009, Monzini	ZFMK-DNA-JJ0888, ZFMK-TIS-cl942	GU213633 GU213767
Echinodera germanni Stüben 2003; ECHger	MOROCCO: High Atlas, N Tizi-n-Test, Tachguette; N30°52'25" W08°21'25", 2047m; Euphorbia nicaeensis, Quercus ilex, broom, 2009, Stüben	ZFMK-DNA-JJ0838, ZFMK-TIS-cE881	GU213616 GU213751
Echinodera guacimara Stüben & Germann 2005; ECHgci	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Las Bodegas; N28°33'42" W16°09'25", 502m; 2008, Astrin & Stüben	ZFMK-DNA-JJ0615, ZFMK-TIS-cE688	FJ716517 FJ716566
Echinodera guacimara Stüben & Germann 2005; ECHgci	SPAIN: Canary Islands, Tenerife, East Anaga Mts, E La Laguna, E Lomo de las Bodegas; N28°33'38" W16°09'20", 500m, 2003, Stüben	ZFMK-DNA-JJ0500, ZFMK-TIS-cE561	GU213567 GU213701
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, El Hierro, 8 km W La Frontera, Pista Derrabado; N27°44'10" W18°04'26", 796m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0115, ZFMK-TIS-cC0142	EU286312 EU286477
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, El Hierro, 1 km SW Guarazoca, Camino de la Pena; N27°48'06" W17°58'47", 746m; laurisilva, 2007, Stüben	ZFMK-DNA-JJ0116, ZFMK-TIS-cC0143	GU213503 GU213638
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, El Hierro, 2,5 km E Frontera, Mt. Timbarombo; N27°45'04" W17°59'02", 1311m; Pericallis murrayi, 2006, Stüben	ZFMK-DNA-JJ0317, ZFMK-TIS-cE0277	GU213534 GU213669
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, El Hierro, 3 km N San Andres, Montaña de la Fara; N27°47'39" W17°56'55", 936m; Foeniculum vulgare, 2006, Stüben	ZFMK-DNA-JJ0318, ZFMK-TIS-cE0281	GU213535 GU213670
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, La Palma, 11 km NE El Paso, Mt. Tagoja; N28°43'18" W17°47'07", 1047m; laurisilva, Chamaecytisus proliferus, 2006, Stüben	ZFMK-DNA-JJ0117, ZFMK-TIS-cC0144	GU213504 GU213639
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, La Palma, Cumbre Nueva, 4,5 km SE El Paso, El Pilar; N28°37'37" W17°49'45", 1432m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0118, ZFMK-TIS-cC0145	GU213505 GU213640
Echinodera hystrix Wollaston 1864; ECHhys	SPAIN: Canary Islands, La Palma, 6,5 km SE El Paso, San Isidro; N28°38'39" W17°48'02", 919m; Ficus, Laurus, 2006, Stüben	ZFMK-DNA-JJ0121, ZFMK-TIS-cC0148	GU213508 GU213643
Echinodera ibleiensis Stüben 2003; ECHibl	ITALY: Sicilia (SR), 1,5 km S Ferla, Valle dell'Anapo, Monti Iblei; N37°06'14" E14°56'07", 450m; Castanea, Quercus, Ceratonia siliqua, 2002, Stüben	ZFMK-DNA-JJ0391, ZFMK-TIS-cl496	GU213552 GU213687
Echinodera ifranensis Stüben 2002; ECHifr	MOROCCO: Middle Atlas, S Azrou, S Ain Leuh; N33°12'50" W05°20'37", 1729m; Quercus ilex, 2009, Stüben	ZFMK-DNA-JJ0849, ZFMK-TIS-cE892	GU213617 GU213752
Echinodera ketamaensis Stüben 2002; ECHket	MOROCCO: Rif, 10 km W Ketama; N34°57'40" W04°40'51", 1600m; Cedrus, Prunus, 2009, Stüben	ZFMK-DNA-JJ0866, ZFMK-TIS-cE909	GU213623 GU213758
Echinodera kroumiriensis Stüben 2004; ECHKro	TUNISIA: Fôret de Feidja, 40 km W Jendouba; N36°32'50" E08°19'25", 1000m; Quercus sp., 2003, Stüben	ZFMK-DNA-JJ0396, ZFMK-TIS-cT501	GU988316
Echinodera kroumiriensis Stüben 2004; ECHKro	TUNISIA: Kroumirie, 2 km E Ain Draham, Jebel Bir; N36°46'20" E08°42'40", 770m; Quercus suber, Quercus sp., 2003, Stüben	ZFMK-DNA-JJ0395, ZFMK-TIS-cT500	GU213556 GU213691
Echinodera merkli (Meyer 1896); ECHmer	GREECE: Epirus, N Metsovo, Katara Pass; N39°46'59" E21°09'09", 1419m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0338, ZFMK-TIS-cEP0385	FJ716491 FJ716543
Echinodera montana Stüben & Astrin; ECHmnt	SPAIN: Fuerteventura, Pico de la Zarza; 800m; , 2008, Brustel	ZFMK-DNA-JJ0713, ZFMK-TIS-cE802	GU213600 GU213735
Echinodera nebrodiensis Stüben 2003; ECHneb	ITALY: Sicilia, Madonie Castelbuono, Rifugio Crispi Agrifol., Piano Pomo; 1400m; Fagus, 2008, Kapp	ZFMK-DNA-JJ0786, ZFMK-TIS-cl828	GU213608 GU213743
Echinodera nebrodiensis Stüben 2003; ECHneb	ITALY: Sicilia (ME), Mte. Soro 13 km NW Cesarò, P.N. dei Nebrodi; N37°56'27" E14°38'08", 1400m; Fagus, Ilex, 2002, Stüben	ZFMK-DNA-JJ0244, ZFMK-TIS-cl0416	GU213526 GU213661
Echinodera nuraghia Stüben 2009; ECHnur	ITALY: Sardinia, 13 km NE Macomer, near Lei, Massiv de MarghinMt. Lameddari; N40°19'43" E08°54'04", 990m; Quercus ilex, 2004, Stüben	ZFMK-DNA-JJ0388, ZFMK-TIS-cl493	GU213550 GU213685
Echinodera ochsi (F. Solari 1952); ECHoch	FRANCE: Alpes-Maritimes, 3 km NW Sospel, Col de Braus; N43°52'22" E07°23'57", 1048m; Quercus ilex, broom, 2007, Stüben	ZFMK-DNA-JJ0415, ZFMK-TIS-cF444	GU213559 GU213694
Echinodera ochsi (F. Solari 1952); ECHoch	FRANCE: Alpes-Maritimes, 5 km S Sospel, Mont Razét; N43°50'59" E07°28'28", 1269m; Quercus ilex, Helleborus, broom, 2007, Stüben	ZFMK-DNA-JJ0417, ZFMK-TIS-cF446	GU213560 GU213695
Echinodera orbiculata Wollaston 1864; ECHorb	SPAIN: Canary Islands, Tenerife, E Los Silos, Teno Mts. El Tanque Bajo; N28°21'39" W16°46'19", 534m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0628, ZFMK-TIS-cE701	GU213582 GU213717
Echinodera orbiculata	SPAIN: Canary Islands, Tenerife, NE La Laguna,	ZFMK-DNA-JJ0618,	GU213581



Wollaston 1864; ECHorb	Anaga Mts. Las Mercedes; N28°31'49" W16°17'12", 905m; laurisilva, 2008, Astrin & Stüben	ZFMK-TIS-cE691	GU213716
Echinodera orbiculata Wollaston 1864; ECHorb	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0610, ZFMK-TIS-cE683	FJ716515 FJ716564
Echinodera orbiculata Wollaston 1864; ECHorb	SPAIN: Canary Islands, Tenerife, 4 km E Los Silos, El Tanque; N28°21'39" W16°46'18", 520m; Foeniculum vulgare, 2004, Stüben	ZFMK-DNA-JJ0502, ZFMK-TIS-cE563	GU988371 GU987936
Echinodera orbiculata Wollaston 1864; ECHorb	SPAIN: Canary Islands, Tenerife, East Anaga Mts, E La Laguna, E Lomo de las Bodegas; N28°33'38" W16°09'20", 500m, 2003, Stüben	ZFMK-DNA-JJ0501, ZFMK-TIS-cE562	GU988370 GU987935
Echinodera orbiculata Wollaston 1864; ECHorb	SPAIN: Canary Islands, Tenerife, N La Laguna, above Punta Hidalgo; 100m; Aeonium, Globularia, 2004, Stüben	ZFMK-DNA-JJ0503, ZFMK-TIS-cE564	GU988372
Echinodera palmaensis Stüben 2000; ECHpal	SPAIN: Canary Islands, La Palma, 1 km S Las Caletas; N28°28'25" W17°50'08", 257m; Ficus carica, 2006, Stüben	ZFMK-DNA-JJ0120, ZFMK-TIS-cC0147	GU213507 GU213642
Echinodera palmaensis Stüben 2000; ECHpal	SPAIN: Canary Islands, La Palma, 1,5 km SW Tijarafa, Las Cadetas; N28°41'29" W17°57'29", 439m; Persea, 2006, Stüben	ZFMK-DNA-JJ0119, ZFMK-TIS-cC0146	GU213506 GU213641
Echinodera palmaensis Stüben 2000; ECHpal	SPAIN: Canary Islands, La Palma, Fuente de Candelaria, 2 km N Tijarafa; N28°42'55" W17°56'48", 707m; 2006, Stüben	ZFMK-DNA-JJ0319, ZFMK-TIS-cE0283	GU213536 GU213671
Echinodera peragalloi (Chevrolat 1863); ECHper	FRANCE: Alpes-Maritimes, 8 km S Sospel, Castillon, Forêt de Menton; N43°49'14" E07°28'54", 321m; Quercus ilex, 2007, Stüben	ZFMK-DNA-JJ0410, ZFMK-TIS-cF439	GU213558 GU213693
Echinodera peragalloi (Chevrolat 1863); ECHper	FRANCE: Alpes-Maritimes, beneath Castagniers; N43°47'25" E07°13'50", 341m; Quercus pubescens, Olea, 2007, Stüben	ZFMK-DNA-JJ0419, ZFMK-TIS-cF448	GU213561 GU213696
Echinodera peragalloi (Chevrolat 1863); ECHper	ITALY: Sardinia, 12 km NE Lula, Monte Albo; N40°32'15" E09°36'11", 750m; Quercus ilex, 2004, Stüben	ZFMK-DNA-JJ0477, ZFMK-TIS-cl492	GU213563 GU213697
Echinodera personata Colonnelli 1985; ECHpen	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte; N28°21'39" W16°52'12", 130m; , 2008, Astrin & Stüben	ZFMK-DNA-JJ0620, ZFMK-TIS-cE693	FJ716519 FJ716568
Echinodera personata Colonnelli 1985; ECHpen	SPAIN: Canary Islands, Tenerife, 6 km W Los Silos, Casa Blanca; N28°21'40" W16°52'15", 120m; Foeniculum vulgare, 2003, Stüben	ZFMK-DNA-JJ0505, ZFMK-TIS-cE566	GU213569 GU213703
Echinodera personata Colonnelli 1985; ECHpen	SPAIN: Canary Islands, Tenerife, S Buenavista del Norte, S Masca; N28°18'05" W16°49'36", 900m, 2004, Stüben	ZFMK-DNA-JJ0506, ZFMK-TIS-cE567	GU213570 GU213704
Echinodera picta Wollaston 1864; ECHpic	SPAIN: Fuerteventura, Betancuria; 390m; 2008, Brustel	ZFMK-DNA-JJ0768, ZFMK-TIS-cE803	GU213607 GU213742
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Hermigua, above Hermigua; N28°08'01" W17°11'59", 569m; detritus, 2008, Astrin	ZFMK-DNA-JJ0687, ZFMK-TIS-cE748	GU213593 GU213728
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Hermigua, above Hermigua; N28°08'01" W17°11'59", 569m; detritus, 2008, Astrin	ZFMK-DNA-JJ0688, ZFMK-TIS-cE749	GU213594 GU213729
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Hermigua, above Hermigua; N28°08'01" W17°11'59", 569m; detritus, 2008, Astrin	ZFMK-DNA-JJ0689, ZFMK-TIS-cE750	GU213595 GU213730
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, Hermigua, Ibo Alfaro; N28°09'58" W17°12'11", 255m; Persea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0661, ZFMK-TIS-cE734	GU213588 GU213723
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, Hermigua, Ibo Alfaro; N28°09'58" W17°12'11", 255m; Persea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0699, ZFMK-TIS-cE734	GU213598 GU213733
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, Hermigua, Ibo Alfaro; N28°09'58" W17°12'11", 255m; Persea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0700, ZFMK-TIS-cE734	GU213599 GU213734
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0645, ZFMK-TIS-cE718	FJ716527 FJ716575
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Hermigua; N28°08'45" W17°12'19", 282m; Ficus, Persea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0666, ZFMK-TIS-cE739	GU213589 GU213724
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Hermigua; N28°08'45" W17°12'19", 282m; Ficus, Persea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0669, ZFMK-TIS-cE739	GU213591 GU213726
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; Ocotea foetens, 2008, Astrin & Stüben	ZFMK-DNA-JJ0646, ZFMK-TIS-cE719	GU213585 GU213720
Echinodera	SPAIN: Canary Islands, La Gomera, S Vallehermoso,	ZFMK-DNA-JJ0697,	GU213596

pseudohystrix Stüben 2000; ECHpsh	La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; Ocotea foetens, 2008, Astrin & Stüben	ZFMK-TIS-cE719	GU213731
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0658, ZFMK-TIS-cE731	GU213586 GU213721
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas del Palmar; N28°09'29" W17°09'37", 627m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0698, ZFMK-TIS-cE731	GU213597 GU213732
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, W Hermigua, beneath Agulo, N28°11'29" W17°11'33", 137m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0659, ZFMK-TIS-cE732	GU213587 GU213722
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, W Hermigua, beneath Agulo; N28°11'28" W17°11'36", 170m; Persea, Mangifera, 2008, Astrin & Stüben	ZFMK-DNA-JJ0668, ZFMK-TIS-cE741	GU213590 GU213725
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, W Hermigua, beneath Agulo; N28°11'28" W17°11'36", 170m; Persea, Mangifera, 2008, Astrin & Stüben	ZFMK-DNA-JJ0670, ZFMK-TIS-cE741	GU213592 GU213727
Echinodera pseudohystrix Stüben 2000; ECHpsh	SPAIN: Canary Islands, La Gomera, 2 km W Hermigua; N28°09'51" W17°12'20", 250m; under Persea, 2004, Stüben	ZFMK-DNA-JJ0508, ZFMK-TIS-cE569	GU213571 GU213706
Echinodera rificensis Stüben 2001; ECHrif	MOROCCO: Rif, E Bab-Taza, Chefarat; N35°03'36" W05°06'57", 861m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0850, ZFMK-TIS-cE893	GU213618 GU213753
Echinodera rificensis Stüben 2001; ECHrif	MOROCCO: Rif, N Bab-Taza, Talembote; N35°14'47" W05°11'31", 361m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0851, ZFMK-TIS-cE894	GU213619 GU213754
Echinodera rificensis Stüben 2001; ECHrif	MOROCCO: Rif, SE Oued-Laou, vir. Bou Hamed; N35°21'44" W04°59'05", 121m; Pistacia, 2009, Stüben	ZFMK-DNA-JJ0852, ZFMK-TIS-cE895	GU213620 GU213755
Echinodera rificensis Stüben 2001; ECHrif	MOROCCO: Rif, SW Oued-Laou, river, O. Laou; N35°17'47" W05°13'38", 210m; Quercus suber, Smilax, Arbutus, 2009, Stüben	ZFMK-DNA-JJ0853, ZFMK-TIS-cE896	GU988576 GU988136
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, near Pedreguer; N38°46'53" E00°00'52", 136m; Quercus ilex, 2008	ZFMK-DNA-JJ0530, ZFMK-TIS-cE591	GU213573 GU213708
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, near Pedreguer; N38°46'53" E00°00'52", 136m; Quercus ilex, 2008	ZFMK-DNA-JJ0531, ZFMK-TIS-cE592	GU988385 GU987945
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 6,5 NW Callosa d'En Sarrià, Sierra de Aixorta; N38°41'59" W00°10'34", 1091m; Erinacea anthyllis, Quercus ilex, 2007	ZFMK-DNA-JJ0252, ZFMK-TIS-cE0176	GU988240 GU987823
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 7 km SW Alcoi, Sierra de Menechaor, Santurio de la Font Roja; N38°39'34" W00°32'29", 1296m; Quercus ilex, Erinacea anthyllis, 2007	ZFMK-DNA-JJ0480, ZFMK-TIS-cE0182	GU213564 GU213698
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 7 km SW Alcoi, Sierra de Menechaor, Santurio de la Font Roja; N38°39'34" W00°32'29", 1296m; Quercus ilex, Erinacea anthyllis, 2007	ZFMK-DNA-JJ0223, ZFMK-TIS-cE0182	GU988235 GU987818
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 9 km SE Alcoi, Sierra del Rentonar, Puerto del Rentonar; N38°38'05" W00°24'25", 1011m; Quercus ilex, 2007	ZFMK-DNA-JJ0254, ZFMK-TIS-cE0179	GU213529 GU213664
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 5 km NW Callosa d'en Sarrià, Sierra de Aixorta, Morro Blan; N38°41'38" W00°09'42", 1106m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0474, ZFMK-TIS-cE487	GU988352 GU987923
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 5 km NW Callosa d'en Sarrià, Sierra de Aixorta, Morro Blan; N38°41'38" W00°09'42", 1106m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0482, ZFMK-TIS-cE0155	GU213565 GU213699
Echinodera roudieri Stüben 1998; ECHrou	SPAIN: Alicante, 5km NW Callosa d'en Sarrià, Sierra de Aixorta, Morro Blan; N38°41'38" W00°09'42", 1106m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0128, ZFMK-TIS-cE0155	EU286317 EU286482
Echinodera setosagraciilis Stüben 2004; ECHsto	TUNISIA: Kef Soltane, 28 km E Thala; N35°33'40" E08°58'39", 1200m; Quercus ilex, 2003, Stüben	ZFMK-DNA-JJ0399, ZFMK-TIS-cT504	GU213557 GU213692
Echinodera settefratelliensis Stüben 2005; ECHsto	ITALY: Sardinien (South), 33 km NE CagliariSarrabus (Mts.), Rio di Cannas; N39°20'52" E09°27'18", 110m; Quercus ilex, Arbutus, Salix, Pistacia lentiscus, 2004, Stüben	ZFMK-DNA-JJ0390, ZFMK-TIS-cl495	GU213551 GU213686
Echinodera siciliensis Stüben 2003; ECHsic	ITALY: Sizilia, 6017, Monte Soro; 1830m; Fagus, 2008, Kapp	ZFMK-DNA-JJ0887, ZFMK-TIS-cl825	GU213632 GU213766
Echinodera siciliensis Stüben 2003; ECHsic	ITALY: Sizilia, Monte Soro; 1830m; Fagus, 2008, Kapp	ZFMK-DNA-JJ0783, ZFMK-TIS-cl825	GU988530 GU988091
Echinodera siciliensis Stüben 2003; ECHsic	ITALY: Sicilia (PA), 19 km SE Bagheria, Monti di Calamigna, NE Ventimiglia di Sicilia, N37°55'33" E13°35'48", 581m; Quercus ilex, 2006, Stüben	ZFMK-DNA-JJ0125, ZFMK-TIS-cl0152	GU213510 GU213645
Echinodera siciliensis Stüben 2003; ECHsic	ITALY: Sicilia (TP), 26 km NE Trapani, SE Capo San Vito; N38°09'00" E12°46'19", 35m; Quercus, Fraxinus, 2006, Stüben	ZFMK-DNA-JJ0126, ZFMK-TIS-cl0153	EU286315 EU286480
Echinodera siciliensis Stüben 2003; ECHsic	ITALY: Sicily, 4 km SSW Godrano, 2005	ZFMK-DNA-JJ0029, ZFMK-TIS-cD0070	GU988175 GU987765
Echinodera sp. 1; es1	ITALY: Sicilia (PA), 5 km E Partinico, Santuario del	ZFMK-DNA-JJ0348,	GU213545

	Romitello; N38°02'37" E13°09'51", 720m; Quercus ilex, Fraxinus, 2006, Stüben	ZFMK-TIS-cl453100	GU213680
Echinodera spinosa Stüben 2003; ECHspi	SPAIN: Málaga, N Estepona, Sierra Bermeja, Los Reales; N36°29'32" W05°11'47", 1071m; broom, 2009, Stüben	ZFMK-DNA-JJ0738, ZFMK-TIS-cE766	GU988499 GU988059
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Cádiz, 14 km N Ubrique, Sierra Zafalgar, Puerto de las Palomas; N36°47'16" W05°22'36", 1286m; broom, Bupleurum, Euphorbia nicaensis, 2007	ZFMK-DNA-JJ0277, ZFMK-TIS-cE0217	GU988253 GU987836
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Cádiz, 2,5 km N Ubrique, Sierra de Ubrique; N36°41'50" W05°26'20", 646m; Quercus ilex, Ceratonia, Olea, Pistacia lentiscus, 2007	ZFMK-DNA-JJ0264, ZFMK-TIS-cE0199	GU213531 GU213666
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, 13 km SE Ubrique, Sierra de Líbar, Cortes de la Fa.; N36°38'29" W05°18'26", 439m; Quercus ilex, broom, 2007	ZFMK-DNA-JJ0267, ZFMK-TIS-cE0202	GU988248 GU987831
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, 20 km NE Ubrique, Sierra de Grazalema; N36°46'32" W05°15'05", 688m; Quercus , Ceratonia, 2007	ZFMK-DNA-JJ0265, ZFMK-TIS-cE0200	GU988246 GU987829
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, 7,5 km N Estepona, Sierra Bermeja, Los Reales; N36°29'32" W05°11'45", 1071m; Quercus ilex, broom, 2007	ZFMK-DNA-JJ0274, ZFMK-TIS-cE0214	GU213533 GU213668
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, 9 km SE Ubrique, Sierra de Líbar; N36°36'52" W05°23'16", 663m; Quercus ilex, Ceratonia, 2007	ZFMK-DNA-JJ0263, ZFMK-TIS-cE0196	GU988245 GU987828
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Andalucía, 11 km S Ronda, Sierra de las Nieves, N36°39'51" W05°05'01", 1047m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0122, ZFMK-TIS-cE0149	EU286313 EU286478
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, N Marbella, Puerto de Ojen; N36°34'33" W04°51'25", 545m; Ceratonia, 2009, Stüben	ZFMK-DNA-JJ0744, ZFMK-TIS-cE776	GU213603 GU213738
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, NW Marbella, Benahavis; N36°31'00" W05°02'23", 129m; Ceratonia, Pistacia, 2009, Stüben	ZFMK-DNA-JJ0748, ZFMK-TIS-cE779	GU213604 GU213739
Echinodera spinosa Stüben 2006; ECHspi	SPAIN: Málaga, NW Marbella, Sierra de las Nieves; N36°39'52" W05°04'57", 1043m; Quercus ilex, Echinodera spinosa, 2009, Stüben	ZFMK-DNA-JJ0746, ZFMK-TIS-cE777	GU988505 GU988065
Echinodera suber Stüben 2001; ECHsbr	MOROCCO: 10 km W Sebta (Ceuta), 3 km N Benzou; N35°53'06" W05°24'06", 330m; Quercus suber, Quercus ilex, Pistacia , 2001, Stüben	ZFMK-DNA-JJ0392, ZFMK-TIS-cM497	GU213553 GU213688
Echinodera suber Stüben 2001; ECHsbr	MOROCCO: W Sebta, vir. Biutz; N35°53'04" W05°24'08", 337m; Quercus suber, Smilax, Arbutus, 2009, Stüben	ZFMK-DNA-JJ0858, ZFMK-TIS-cE901	GU213622 GU213757
Echinodera tenoensis Stüben 2000; ECHten	SPAIN: Canary Islands, Tenerife, 4 km E Los Silos, El Tanque; N28°21'39" W16°46'18", 520m; Foeniculum vulgare, 2004, Stüben	ZFMK-DNA-JJ0507, ZFMK-TIS-cE568	FJ716511 GU213705
Echinodera tenoensis Stüben 2000; ECHten	SPAIN: Canary Islands, Tenerife, 4 km E Los Silos, El Tanque; N28°21'39" W16°46'18", 520m; Foeniculum vulgare, 2004, Stüben	ZFMK-DNA-JJ0694, ZFMK-TIS-cE755	GU988478 GU988040
Echinodera tenoensis Stüben 2000; ECHten	SPAIN: Canary Islands, Tenerife, E Los Silos, Teno Mts. El Tanque Bajo; N28°21'39" W16°46'19", 534m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0633, ZFMK-TIS-cE706	GU213583 GU213718
Echinodera variegata (Boheman 1837); ECHvar	ITALY: Sicilia (PA), 10 km NW Petralia Soprana, P.R. Madonie; N37°50'29" E14°00'39", 1000m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0239, ZFMK-TIS-cl0411	GU213524 GU213659
Echinodera variegata (Boheman 1837); ECHvar	ITALY: Sicilia (PA), 8 km S Carini, W M. Gibilmesi; N38°04'03" E13°11'37"; Quercus, 2006, Stüben	ZFMK-DNA-JJ0240, ZFMK-TIS-cl0412	GU213525 GU213660
Echinodera vitoensis Stüben 2006; ECHvit	ITALY: Sicilia (TP), 26 km NE Trapani, SE Capo San Vito; N38°09'00" E12°46'19", 35m; Quercus, Fraxinus, 2006, Stüben	ZFMK-DNA-JJ0127, ZFMK-TIS-cl0154	EU286316 EU286481
Echinodera zaghouanensis Stüben 2004; ECHzag	TUNISIA: Dorsale, Jebel Zaghouan, 6 km S Zaghouan; N36°21'55" E10°06'30", 650m; Ceratonia, 2003, Stüben	ZFMK-DNA-JJ0393, ZFMK-TIS-cT498	GU213554 GU213689
Echiumacalles anagaensis (Stüben 2000); ECAana	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Las Bodegas; N28°33'42" W16°09'25", 502m; Echium strictum, 2008, Astrin & Stüben	ZFMK-DNA-JJ0613, ZFMK-TIS-cE686	FJ716516 FJ716565
Echiumacalles anagaensis (Stüben 2000); ECAana	SPAIN: Canary Islands, La Gomera, 2,5 km E Hermigua; N28°09'30" W17°09'46", 650m; Echium strictum, 2004, Stüben	ZFMK-DNA-JJ0484, ZFMK-TIS-cE545	GU988356 GU987925
Echiumacalles anagaensis (Stüben 2000); ECAana	SPAIN: Canary Islands, Tenerife, East Anaga Mts, 19 km NE La Laguna, Lomo de las Bodegas; N28°33'43" W16°09'25", 500m; Sonchus acaulis, Kleinia, Echium strictum, 2003, Stüben	ZFMK-DNA-JJ0485, ZFMK-TIS-cE546	GU988357 GU987926
Elliptalcalles baeticus Stüben 2008; ELLbae	SPAIN: Málaga, W Estepona; N36°25'58" W05°14'42", 189m; Quercus, Ceratonia, Pistacia, 2009, Stüben	ZFMK-DNA-JJ0739, ZFMK-TIS-cE768	GU988500 GU988060
Elliptalcalles longus	SPAIN: Cádiz, 2,5 km N Ubrique, Sierra de Ubrique;	ZFMK-DNA-JJ0176,	EU286335

(Desbrochers 1892); ELLlon	N36°41'50" W05°26'20", 646m; Quercus ilex, Ceratonia, Olea, Pistacia lentiscus, 2007	ZFMK-TIS-cE0198	EU286499
Elliptacalles longus (Desbrochers 1892); ELLlon	SPAIN: Málaga, 16 km N Estepona, Sierra Bermeja, Jubrique; N36°33'49" W05°12'27", 557m; Quercus suber, 2007	ZFMK-DNA-JJ0179, ZFMK-TIS-cE0213	EU286337 EU286501
Elliptacalles longus (Desbrochers 1892); ELLlon	ITALY: Sicilia (PA), 6 km SW Carini, Montagna Longa; N38°07'10" E13°08'31", 647m; Quercus ilex, 2006, Stüben	ZFMK-DNA-JJ0077, ZFMK-TIS-cI0096	EU286293 EU286458
Elliptacalles longus (Desbrochers 1892); ELLlon	MOROCCO: High Atlas, SE Asni, Tacheddirt (near Imilil); N31°09'07" W07°50'18", 2420m; broom, Daphne, 2009, Stüben	ZFMK-DNA-JJ0842, ZFMK-TIS-cE885	GU988571 GU988131
Ficusacalles senilis ficvorator (Stüben 2007); FICfic	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte; N28°21'36" W16°52'10", 231m; 2008, Astrin & Stüben	ZFMK-DNA-JJ0623, ZFMK-TIS-cE696	GU988443 GU988005
Ficusacalles senilis ficvorator (Stüben 2007); FICfic	SPAIN: Canary Islands, La Palma, 1 km N Las Caletas; N28°29'36" W17°49'46", 433m; Ficus carica, 2007, Stüben	ZFMK-DNA-JJ0067, ZFMK-TIS-cC0084	GU988195 GU987781
Ficusacalles senilis ficvorator (Stüben 2007); FICfic	SPAIN: Canary Islands, La Palma, 2 km W Barlovento, Bco. de la Vica; N28°49'12" W17°49'17", 494m; laurisilva, Hedera canariensis, 2006, Stüben	ZFMK-DNA-JJ0068, ZFMK-TIS-cC0085	GU988196 GU987782
Ficusacalles senilis ficvorator (Stüben 2007); FICfic	SPAIN: Canary Islands, Tenerife, 6 km W Los Silos, Casa Blanca; N28°21'40" W16°52'15", 120m; Foeniculum vulgare, Kleinia, 2003, Stüben	ZFMK-DNA-JJ0496, ZFMK-TIS-cE557	GU988367 GU987931
Ficusacalles senilis ficvorator (Stüben 2007); FICfic	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte, Levada; N28°21'35" W16°52'05", 230m; Ficus carica, Sonchus, Foeniculum vulgare, 2008, Astrin & Stüben	ZFMK-DNA-JJ0634, ZFMK-TIS-cE707	GU988449 GU988011
Ficusacalles senilis senilis (Wollaston 1864); FICsen	SPAIN: Canary Islands, El Hierro, 2,5 km N San Andres, Las Montanetas; N27°48'08" W17°57'36", 847m; Ficus, 2006, Stüben	ZFMK-DNA-JJ0069, ZFMK-TIS-cC0086	GU988197 GU987783
Ficusacalles senilis senilis (Wollaston 1864); FICsen	SPAIN: Canary Islands, El Hierro, 1 km SW Guarazoca, Camino de la Pena; N27°48'06" W17°58'47", 746m; Carlina salicifolia, 2007, Stüben	ZFMK-DNA-JJ0305, ZFMK-TIS-cE0260	GU988276 GU987858
Ficusacalles senilis senilis (Wollaston 1864); FICsen	SPAIN: Canary Islands, El Hierro, 2,5 km E Frontera, Mt. Timbarombo; N27°45'04" W17°59'02", 1311m; Pericallis murrayi, 2006, Stüben	ZFMK-DNA-JJ0304, ZFMK-TIS-cE0259	FJ716490 FJ716542
Ficusacalles senilis senilis (Wollaston 1864); FICsen	SPAIN: Canary Islands, El Hierro, 3 km N San Andres, N slope Montaña de la Fara; N27°47'39" W17°56'55", 936m; Foeniculum vulgare, 2006, Stüben	ZFMK-DNA-JJ0070, ZFMK-TIS-cC0087	GU988198 GU987784
Ficusacalles senilis senilis (Wollaston 1864); FICsen	SPAIN: Canary Islands, El Hierro, 9,5 km W La Frontera, Pista de Mencafitte; N27°44'06" W18°05'08", 929m; Chamaecytisus, Ficus, 2006, Stüben	ZFMK-DNA-JJ0303, ZFMK-TIS-cE0257	GU988275 GU987857
Kyklioacalles anthyllis Stüben 2004; KYKant	SPAIN: Jaén, Cazorla, El Chorro; N37°50'25" W02°59'24", 1559m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0536, ZFMK-TIS-cE597	GU981543 GU981494
Kyklioacalles anthyllis Stüben 2004; KYKant	SPAIN: Jaén, Cazorla, spring near El Chorro; N37°50'28" W02°59'11", 1449m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0537, ZFMK-TIS-cE598	GU988387 GU987947
Kyklioacalles anthyllis Stüben 2004; KYKant	SPAIN: Andalucía, 14 km NW Laujar, Sierra Nevada; N37°05'14" W02°59'47", 2283m; Erinacea anthyllis under Pinus, 2005, Stüben	ZFMK-DNA-JJ0058, ZFMK-TIS-cE0075	GU988190 GU987779
Kyklioacalles anthyllis Stüben 2004; KYKant	SPAIN: Andalucía, 20 km NW Laujar, Sierra Nevada, N Puerto de la Ragua; N37°07'39" W03°02'14", 1921m; broom under Pinus, 2005, Stüben	ZFMK-DNA-JJ0057, ZFMK-TIS-cE0074	GU981519 GU981471
Kyklioacalles anthyllis Stüben 2004; KYKant	SPAIN: Andalucía, 26 km E Jaén, Sierra Magina; N37°44'06" W03°30'09", 1663m; Erinacea anthyllis under Pinus, 2005, Stüben	ZFMK-DNA-JJ0061, ZFMK-TIS-cE0078	GU988191 GU987780
Kyklioacalles anthyllis Stüben 2004; KYKant	SPAIN: Andalucía, S. de Cazorla, 9 km S Cazorla; N37°50'23" W02°59'26", 1577m; Erinacea anthyllis, 2003, Stüben	ZFMK-DNA-JJ0062, ZFMK-TIS-cE0079	EU286291 EU286456
Kyklioacalles apogeus (Peyerimhoff 1925); KYKapo	MOROCCO: High Atlas, 14 km E Asni, "Oukaimeden"; N31°12'13" W07°50'29", 2300m; Erinacea anthyllis, 2002, Stüben	ZFMK-DNA-JJ0913, ZFMK-TIS-cMo950	GU981565 GU981516
Kyklioacalles astragali Stüben 2003; KYKast	SPAIN: Andalucía, 9 km N Laujar, Sierra Nevada; N37°04'00" W02°55'50", 2055m; Erinacea anthyllis under Pinus, Bupleurum, 2005, Stüben	ZFMK-DNA-JJ0059, ZFMK-TIS-cE0076	GU981520 GU981472
Kyklioacalles astragali Stüben 2003; KYKast	SPAIN: Granada, Sierra de Baza, Santa Barbara; N37°22'09" W02°50'55", 2200m; Astragalus granatensis, 2001, Stüben	ZFMK-DNA-JJ0060, ZFMK-TIS-cE0077	EU286290 EU286455
Kyklioacalles atlasicus Stüben & Astrin; KYKats	MOROCCO: High Atlas, E Marrakech, N Taddert, (near Tazouguerte); N31°28'07" W07°24'59", 1727m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0845, ZFMK-TIS-cE888	GU981563 GU981514
Kyklioacalles atlasicus Stüben & Astrin; KYKars	MOROCCO: High Atlas, E Marrakech, N Taddert, (near Tazouguerte); N31°28'18" W07°24'21", 1498m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0844, ZFMK-TIS-cE887	GU981562 GU981513
Kyklioacalles aubei	ITALY: Sizilia, Monte Soro; 1830m; Fagus, 2008,	ZFMK-DNA-JJ0784,	GU988531

(Boheman 1837); KYKaub	Kapp	ZFMK-TIS-cl826	GU988092
Kyklioacalles aubei (Boheman 1837); KYKaub	FRANCE: Isère, 14 km N Grenoble, Massif de la Chartreus, NW Col de Porte; N45°18'40" E05°45'17", 1649m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0161, ZFMK-TIS-cl0039	GU988223 GU987807
Kyklioacalles aubei (Boheman 1837); KYKaub	FRANCE: Isère, 19 km S Bourgoin, N Semons; N45°26'01" E05°12'06", 448m; Quercus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0044, ZFMK-TIS-cl0009	GU988185 GU987775
Kyklioacalles aubei (Boheman 1837); KYKaub	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'44", 813m; Fagus, Fraxinus, Quercus, 2005, Stüben	ZFMK-DNA-JJ0016, ZFMK-TIS-cl0018	GU988167 GU987757
Kyklioacalles aubei (Boheman 1837); KYKaub	FRANCE: Alpes-Maritimes, 9 km N Sospel, N Moulinet; N43°57'58" E07°24'55", 1111m; Castanea sativa, 2007, Stüben	ZFMK-DNA-JJ0407, ZFMK-TIS-cf436	GU981536 GU981487
Kyklioacalles aubei (Boheman 1837); KYKaub	FRANCE: Dép. Loire, SW Pélussin, Mont Pilat, near Crêt de l'Oeillon; N45°24'24" E04°37'06", 1122m; Fagus, 2009, Stüben	ZFMK-DNA-JJ0903, ZFMK-TIS-cf930	GU988601
Kyklioacalles aubei (Boheman 1837); KYKaub	FRANCE: Isère, 4 km E La Chapelle-de-Surieu; N45°24'18" E04°56'26", 325m; Fagus, Alnus, 2006, Stüben	ZFMK-DNA-JJ0182, ZFMK-TIS-cf0226	EU286339 EU286503
Kyklioacalles aubei (Boheman 1837); KYKaub	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0563, ZFMK-TIS-cl624	GU988409 GU987969
Kyklioacalles aubei (Boheman 1837); KYKaub	SLOVENIA: Kamnisko-Savinjske Alpe, Zg. Jezersko, Zg. Jezersko env.; Fagus, 2006, Stejskal	ZFMK-DNA-JJ0181, ZFMK-TIS-cSLO0225	GU988228 GU987812
Kyklioacalles aubei (Boheman 1837); KYKaub	SLOVENIA: Sv. Ana env., 20 km NE of Maribor; Fagus, Quercus, 2006, Stejskal	ZFMK-DNA-JJ0180, ZFMK-TIS-cSLO0224	EU286338 EU286502
Kyklioacalles bupleuri Stüben 2004; KYKbup	SPAIN: Alicante, 6,5 NW Callosa d'En Sarrià Sarrià, Sierra de Aixorta; N38°41'59" W00°10'34", 1091m; Erinacea anthyllis, Quercus ilex, 2007	ZFMK-DNA-JJ0222, ZFMK-TIS-cE0178	GU988234 GU987817
Kyklioacalles bupleuri Stüben 2004; KYKbup	SPAIN: Cádiz, 14 km N Ubrique, Sierra Zafalgar, Puerto de las Palomas; N36°47'16" W05°22'36", 1286m; broom, Bupleurum, Euphorbia nicaensis, 2007	ZFMK-DNA-JJ0278, ZFMK-TIS-cE0218	GU981530 GU981482
Kyklioacalles bupleuri Stüben 2004; KYKbup	SPAIN: Andalucía, 35 km E Jaén, Sierra Magina; N37°45'53" W03°23'19", 1328m; Euphorbia nicaensis, 2005, Stüben	ZFMK-DNA-JJ0133, ZFMK-TIS-cE0161	EU286322 EU286486
Kyklioacalles bupleuri Stüben 2004; KYKbup	TUNISIA: Dorsale, 16 km E Maktar, N Haute Kesra; N35°50'23" E09°22'36", 1050m; Bupleurum spinosum, 2003, Stüben	ZFMK-DNA-JJ0131, ZFMK-TIS-cT0158	EU286320
Kyklioacalles characivorus Stüben 2005; KYKcha	ITALY: Sardinia, 15 km SW Lanusei, Barbagia Seulo, Monte Arqueri; N39°49'36" E09°22'27", 960m; Euphorbia characias, 2005, Stüben	ZFMK-DNA-JJ0132, ZFMK-TIS-cl0159	EU286321 EU286485
Kyklioacalles erinaceus Stüben 2003; KYKeri	SPAIN: Alicante, 7 km SW Alcoi, Sierra de Menechaor, Santurio de la Font Roja; N38°39'34" W00°32'29", 1296m; Erinacea anthyllis, 2007	ZFMK-DNA-JJ0173, ZFMK-TIS-cE0181	EU286332 EU286496
Kyklioacalles euphorbiophilus Stüben 2000; KYKeup	MOROCCO: High Atlas, N Tizi-n-Test, Tachguette; N30°52'25" W08°21'25", 2047m; Euphorbia nicaensis, Quercus ilex, broom, 2009, Stüben	ZFMK-DNA-JJ0836, ZFMK-TIS-cE879	GU981560 GU981511
Kyklioacalles euphorbiophilus Stüben 2003; KYKeup	MOROCCO: High Atlas, 56 km SW Asni, "Tizi-n-Test"; N30°52'25" W08°21'26", 2000m; Euphorbia nicaensis, 2002, Stüben	ZFMK-DNA-JJ0197, ZFMK-TIS-cM0160	EU286349 EU286513
Kyklioacalles fausti (Meyer 1896); KYKfau	ITALY: Abruzzo, P.N. Majella, 11 km N Roccaraso, Bosco di S. Antonio; N41°56'27" E14°01'41", 1321m; Pyrus/Acer, 2008, Stüben	ZFMK-DNA-JJ0598, ZFMK-TIS-cl659	GU981549 GU981500
Kyklioacalles fausti (Meyer 1896); KYKfau	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0564, ZFMK-TIS-cl625	GU213776 GU213772
Kyklioacalles maroccensis (Stüben 2001); KYKmrca	MOROCCO: Anti-Atlas, E Tiznit, Anezi, "El Trine"; N29°44'27" W09°15'25", 612m; Agania spinosa, Ceratonia siliqua, 2009, Stüben	ZFMK-DNA-JJ0835, ZFMK-TIS-cE878	GU213777 GU213773
Kyklioacalles navieresi (Boheman 1837); KYKnav	GERMANY: Rügen, Sassnitz, near Rusewase; N54°32'29" E13°37'46", 144m; Fagus, 2008	ZFMK-DNA-JJ0676, ZFMK-TIS-cD667	GU981550 GU981501
Kyklioacalles navieresi (Boheman 1837); KYKnav	SWEDEN: Karlskrona, Skärva N.R.; N56°12'28" E15°34'23", 20m; Fagus, Quercus, Acer, 2008	ZFMK-DNA-JJ0673, ZFMK-TIS-cS664	GU988467 GU988030
Kyklioacalles navieresi (Boheman 1837); KYKnav	SWEDEN: Ronneby, Almö, next to Golfclub; N56°09'18" E15°26'48", 1m; Fagus, Quercus, 2008	ZFMK-DNA-JJ0674, ZFMK-TIS-cS665	GU988468 GU988031
Kyklioacalles navieresi (Boheman 1837); KYKnav	SWEDEN: Simrishamn, Stenshuvud N.P.; N55°39'15" E14°15'50", 80m, 2008	ZFMK-DNA-JJ0672, ZFMK-TIS-cS663	GU988466 GU988029
Kyklioacalles navieresi (Boheman 1837);	FRANCE: Isère, 12 km SW Bourgoin, N St. Jean de Bournay; N45°31'10" E05°10'01", 432m; Quercus,	ZFMK-DNA-JJ0021, ZFMK-TIS-cl0013	GU988169 GU987759

KYKnav	2005, Stüben		
Kyklioacalles navieresi (Boheman 1837); KYKnav	FRANCE: Isère, 19 km S Bourgoin, N Semons; N45°26'01" E05°12'06", 448m; Quercus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0022, ZFMK-TIS-cl0007	EU286285 EU286450
Kyklioacalles navieresi (Boheman 1837); KYKnav	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0167, ZFMK-TIS-cl0031	GU988227 GU987811
Kyklioacalles navieresi (Boheman 1837); KYKnav	GERMANY: Rheinland-Pfalz, Bausenberg bei Niederzissen; N50°27'52" E07°13'29", 291m; Quercus, Carpinus, Fagus, 2005, Stüben	ZFMK-DNA-JJ0300, ZFMK-TIS-cM0065	GU988273 GU987855
Kyklioacalles navieresi (Boheman 1837); KYKnav	GERMANY: Rheinland-Pfalz, Moseltal, 10 km S Cochem, Bullay; N50°03'27" E07°08'51", 222m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0035, ZFMK-TIS-cM0058	GU988179 GU987769
Kyklioacalles navieresi (Boheman 1837); KYKnav	GERMANY: Rheinland-Pfalz, Moseltal, Cochem, Dekernbach, mountain Wakelay; N50°09'31" E07°09'09", 301m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0034, ZFMK-TIS-cM0046	GU988178 GU987768
Kyklioacalles navieresi (Boheman 1837); KYKnav	FRANCE: Dép. Loire, SW Pélussin, Mont Pilat, near Crêt de l'Oeillon; N45°24'24" E04°37'06", 1122m; Fagus, 2009, Stüben	ZFMK-DNA-JJ0904, ZFMK-TIS-cF931	GU988602
Kyklioacalles navieresi (Boheman 1837); KYKnav	GERMANY: Rheinland-Pfalz, W Karlsruhe, Bienwald; N49°00'49" E08°05'18", 130m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0901, ZFMK-TIS-cD928	GU988599 GU988156
Kyklioacalles navieresi (Boheman 1837); KYKnav	ITALY: Abruzzo, P.N. Majella, 11 km N Roccaraso, Bosco di S. Antonio; N41°56'27" E14°01'41", 1321m; Pyrus/Acer, 2008, Stüben	ZFMK-DNA-JJ0596, ZFMK-TIS-cl657	GU988428 GU987990
Kyklioacalles navieresi (Boheman 1837); KYKnav	ITALY: Abruzzo, P.N. Majella, 11 km N Roccaraso, Bosco di S. Antonio; N41°56'27" E14°01'41", 1321m; Pyrus/Acer, 2008, Stüben	ZFMK-DNA-JJ0597, ZFMK-TIS-cl658	GU988429 GU987991
Kyklioacalles navieresi (Boheman 1837); KYKnav	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0562, ZFMK-TIS-cl623	GU988408 GU987968
Kyklioacalles navieresi (Boheman 1837); KYKnav	ITALY: Campania, Monti Picentini, 9 km N Acerno, Piano Laceno; N40°48'58" E15°07'35", 1210m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0575, ZFMK-TIS-cl636	GU981548 GU981499
Kyklioacalles olceseii (Tournier 1873); KYKcolc	SPAIN: Cádiz, La Línea, Sierra Carbonera, close to hermitage; Chamaerops humilis, 2008, Torres	ZFMK-DNA-JJ0755, ZFMK-TIS-cE787	GU988511 GU988071
Kyklioacalles olceseii (Tournier 1873); KYKcolc	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuera, Cortijo Los Portichuelos; Chamaerops humilis, 2008, Torres	ZFMK-DNA-JJ0714, ZFMK-TIS-cE785	GU988488 GU988049
Kyklioacalles olceseii (Tournier 1873); KYKcolc	SPAIN: Cádiz, San Roque, Pinar del Rey, at the end of recreative zone; broom, 2008, Torres	ZFMK-DNA-JJ0753, ZFMK-TIS-cE784	GU981553 GU981504
Kyklioacalles olceseii (Tournier 1873); KYKcolc	MOROCCO: W Sebta, vir. Biutz; N35°53'04" W05°24'08", 337m; Quercus suber, Smilax, Arbutus, 2009, Stüben	ZFMK-DNA-JJ0855, ZFMK-TIS-cE898	GU981564 GU981515
Kyklioacalles olceseii (Tournier 1873); KYKcolc	SPAIN: Málaga, N Marbella, PN de la Sierra de la Nieves; N36°35'58" W04°55'03", 394m; Olea, 2009, Stüben	ZFMK-DNA-JJ0715, ZFMK-TIS-cE774	GU981551 GU981502
Kyklioacalles oukaimedensis Stüben 2010; KYKkouk	MOROCCO: High Atlas, E Asni, Oukaimeden; N31°12'14" W07°52'21", 2646m; Erinacea, 2009, Stüben	ZFMK-DNA-JJ0840, ZFMK-TIS-cE883	GU213778 GU213774
Kyklioacalles oukaimedensis Stüben 2010; KYKkouk	MOROCCO: High Atlas, SE Asni, Tacheddirt (near Imlil); N31°09'07" W07°50'18", 2420m; broom, Daphne, 2009, Stüben	ZFMK-DNA-JJ0843, ZFMK-TIS-cE886	GU981561 GU981512
Kyklioacalles plantapilosus Stüben & Astrin; KYKpla	SPAIN: Almería, 11 km NW Laujar de Andarax, Sierra Nevada, Bayárcal; N37°02'27" W03°00'12", 1291m; Euphorbia, 2007	ZFMK-DNA-JJ0225, ZFMK-TIS-cE0190	GU981523 GU981475
Kyklioacalles plantapilosus Stüben & Astrin; KYKpla	SPAIN: Almería, 11 km NW Laujar de Andarax, Sierra Nevada, Bayárcal; N37°02'27" W03°00'12", 1291m; Euphorbia, 2007	ZFMK-DNA-JJ0461, ZFMK-TIS-cE0190	GU981540 GU981491
Kyklioacalles provincialis (Hoffmann 1960); KYKpro	FRANCE: Alpes-de-Hautes-Provence, 11 km NE Castellane, near Soleilhas, Col de St. Barnabé; N43°51'55" E06°37'52", 1368m; Helleborus, broom, 2007, Stüben	ZFMK-DNA-JJ0422, ZFMK-TIS-cF451	GU981539 GU981490
Kyklioacalles provincialis (Hoffmann 1960); KYKpro	FRANCE: Alpes-Maritimes, 4 km W Sospel, (near Col de Braus); N43°52'32" E07°23'33", 1055m; Euphorbia spinosa, broom, 2007, Stüben	ZFMK-DNA-JJ0405, ZFMK-TIS-cF434	GU988322 GU987894
Kyklioacalles provincialis (Hoffmann 1960); KYKpro	FRANCE: Alpes-Maritimes, 6 km NW Sospel, Col de l'Orme; N43°54'03" E07°21'46", 1008m; broom, 2007, Stüben	ZFMK-DNA-JJ0416, ZFMK-TIS-cF445	GU988327 GU987899
Kyklioacalles provincialis (Hoffmann 1960); KYKpro	FRANCE: Alpes-Maritimes, 3 km NW Sospel, Col de Braus; N43°52'22" E07°23'57", 1048m; Quercus ilex, broom, 2007, Stüben	ZFMK-DNA-JJ0414, ZFMK-TIS-cF443	GU981537 GU981488
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	FRANCE: Alpes-de-Hautes-Provence, 11 km NE Castellane, near Soleilhas, Col de St. Barnabé; N43°51'55" E06°37'52", 1368m; Helleborus, broom, 2007, Stüben	ZFMK-DNA-JJ0420, ZFMK-TIS-cF449	GU981538 GU981489

Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	SPAIN: Castellón, Morella, pass near Cincorres; N40°33'39" W00°14'54", 1238m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0544, ZFMK-TIS-cE605	GU981546 GU981497
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	SPAIN: Alicante, 6,5 NW Callosa d'En Sarrià Sarrià, Sierra de Aixorta; N38°41'59" W00°10'34", 1091m; Erinacea anthyllis, 2007	ZFMK-DNA-JJ0253, ZFMK-TIS-cE0177	GU981524 GU981476
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	SPAIN: Alicante, 7 km SW Alcoi, Sierra de Menechaor, Santurio de la Font Roja; N38°39'34" W00°32'29", 1296m; Erinacea anthyllis, 2007	ZFMK-DNA-JJ0255, ZFMK-TIS-cE0183	GU981525 GU981477
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	SPAIN: Alicante, 7 km SW Alcoi, Sierra de Menechaor, Santurio de la Font Roja; N38°39'34" W00°32'29", 1296m; Erinacea anthyllis, 2007	ZFMK-DNA-JJ0729, ZFMK-TIS-cE0183	GU988493 GU988053
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	FRANCE: Alpes-Maritimes, 6 km NE Sospel, Col de Brouis; N43°55'28" E07°28'37", 882m; broom, Helleborus, 2007, Stüben	ZFMK-DNA-JJ0404, ZFMK-TIS-cF433	GU988321 GU987893
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	SPAIN: Alicante, 6,5 km NW Callosa d'en Sarrià, Sierra de Aixorta; N38°41'57" W00°10'32", 1074m; Erinacea anthyllis, 2005, Stüben	ZFMK-DNA-JJ0143, ZFMK-TIS-cE0165	EU286325 EU286489
Kyklioacalles punctaticollis meteoricus (Meyer 1909); KYKmet	SPAIN: Aragón, Sierra de Gúdar, 3 km NE Mora de Rubielos; N40°18'59" W00°43'23", 1300m; broom, 2002	ZFMK-DNA-JJ0136, ZFMK-TIS-cE0164	GU988213
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Cádiz, 14 km N Ubrique, Sierra Zafalgar, Puerto de las Palomas; N36°47'16" W05°22'36", 1286m; broom, 2007	ZFMK-DNA-JJ0276, ZFMK-TIS-cE0216	GU981529 GU981481
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Málaga, 13 km SE Ubrique, Sierra de Líbar, Cortes de la Fa.; N36°38'29" W05°18'26", 439m; Quercus ilex, broom, 2007	ZFMK-DNA-JJ0266, ZFMK-TIS-cE0201	GU988247 GU987830
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Málaga, 16 km N Estepona, Sierra Bermeja, Jubrique; N36°33'49" W05°12'27", 557m; Quercus suber, 2007	ZFMK-DNA-JJ0272, ZFMK-TIS-cE0211	GU981528 GU981480
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Málaga, 7 km NW Estepona, Sierra Bermeja, Los Reales; N36°28'59" W05°12'28", 1418m; broom, 2007	ZFMK-DNA-JJ0275, ZFMK-TIS-cE0215	GU988252 GU987835
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Málaga, 9 km SE Ubrique, Sierra de Líbar; N36°36'52" W05°23'16", 663m; Quercus ilex, Ceratonia, 2007	ZFMK-DNA-JJ0262, ZFMK-TIS-cE0195	GU981526 GU981478
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuero, Cortijo Los Puertos; Cynara, 2008, Torres	ZFMK-DNA-JJ0756, ZFMK-TIS-cE790	GU981554 GU981505
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Andalucía, 26 km E Jaén, Sierra Magina; N37°44'06" W03°30'09", 1663m; Erinacea anthyllis, 2005, Stüben	ZFMK-DNA-JJ0134, ZFMK-TIS-cE0162	EU286323 EU286487
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Murcia, 13 km N Totana, Sierra de Espuna; N37°52'07" W01°33'46", 1361m; Erinacea anthyllis, 2005, Stüben	ZFMK-DNA-JJ0135, ZFMK-TIS-cE0163	GU981521 GU981473
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Málaga, N Estepona, Sierra Bermeja, Los Reales; N36°29'32" W05°11'47", 1071m; broom, 2009, Stüben	ZFMK-DNA-JJ0734, ZFMK-TIS-cE767	GU988496 GU988056
Kyklioacalles punctaticollis punctaticollis (Lucas 1849); KYKpun	SPAIN: Málaga, N Marbella, Puerto de Ojen; N36°34'33" W04°51'25", 545m; Ulex, 2009, Stüben	ZFMK-DNA-JJ0745, ZFMK-TIS-cE775	GU981552 GU981503
Kyklioacalles pyrenaicus (Boheman 1844)	CZECH REPUBLIC: W Bohemia (DO), Kdyne, Novy Herstejn rez. (6644), 2008, Kresl	ZFMK-DNA-JJ0767, ZFMK-TIS-cCz801	GU988519 GU988079
Kyklioacalles pyrenaicus (Boheman 1844)	CZECH REPUBLIC: W Bohemia (KT), Balkovy, Doubrava Hill (6545), 2008, Kresl	ZFMK-DNA-JJ0764, ZFMK-TIS-cCz798	GU981555 GU981506
Kyklioacalles pyrenaicus (Boheman 1844)	FRANCE: Isère, 14 km N Grenoble, Massif de la Chartreus, NW Col de Porte; N45°18'40" E05°45'17", 1649m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0026, ZFMK-TIS-cl0035	GU988172 GU987762
Kyklioacalles pyrenaicus (Boheman 1844)	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0047, ZFMK-TIS-cl0028	GU981518 GU981470
Kyklioacalles pyrenaicus (Boheman 1844)	FRANCE: Pyr. Orient., Vernet-Les-Bains; 600m, 1999, Stüben	ZFMK-DNA-JJ0056, ZFMK-TIS-cD0073	GU988189
Kyklioacalles pyrenaicus (Boheman 1844)	Poland: 30 km E Nowy Targ, Karpaty Zachodnie, Kroszcienko-Kras; N49°25'58" E20°26'14", 440m; Fagus, 2004, Stüben	ZFMK-DNA-JJ0378, ZFMK-TIS-cM483	GU981535
Kyklioacalles pyrenaicus	AUSTRIA: Niederösterreich, Merkersdorf, National	ZFMK-DNA-JJ0322,	GU981533

(Boheman 1844)	Park Thayatal, Carpinetum, 2006, Stejskal	ZFMK-TIS-cA0296	GU981485
Kyklioacalles reginae Stüben 2003; KYKreg	SPAIN: Teruel, S. Javalambre, Fuente la Risca near Arcos de las Salinas; N39°59'56" W01°01'21", 1121m; Amelanchier ovalis, Acer monspessulanum, Erinacea anthyllis, Ulex, 2008	ZFMK-DNA-JJ0539, ZFMK-TIS-cE600	GU981544 GU981495
Kyklioacalles reginae Stüben 2003; KYKreg	SPAIN: Teruel, S. Javalambre, grove on wet ground near Camarena de la Sierra; N40°08'30" W01°02'24", 1331m; Juglans regia, Crataegus, Populus, Rubus, 2008	ZFMK-DNA-JJ0543, ZFMK-TIS-cE604	GU981545 GU981496
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	PORTUGAL: Manteigas; N40°23'07" W07°31'37", 1236m; Fagus, Castanea, Quercus, 2008	ZFMK-DNA-JJ0439, ZFMK-TIS-cP539	GU988336 GU987908
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	PORTUGAL: Sa. Estrela, SW Manteigas; N40°18'45" W07°35'03", 1558m; Cytisus, 2009	ZFMK-DNA-JJ0812, ZFMK-TIS-cE854	GU981559 GU981510
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	PORTUGAL: Sa. Marão, W Vila Real, Alto do Espinho; N41°16'15" W07°54'17", 1145m; Amelanchier, Quercus pyrenaica, Cytisus, 2009	ZFMK-DNA-JJ0825, ZFMK-TIS-cE868	GU988558 GU988119
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: Ávila, SW Ávila, N San Martín de la Vega, Pto. de Chía; N40°27'16" W05°10'16", 1718m; Cytisus, 2009	ZFMK-DNA-JJ0799, ZFMK-TIS-cE841	GU988540 GU988101
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: Ávila, SW Ávila, near Mengamuñoz, Pto. de Menga; N40°28'40" W05°00'40", 1564m; Cytisus, 2009	ZFMK-DNA-JJ0797, ZFMK-TIS-cE839	GU988538 GU988099
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: Ávila, SW Ávila, SE Piedrahita, Pto. de la Peña Negra; N40°25'19" W05°18'01", 1910m; Cytisus, 2009	ZFMK-DNA-JJ0802, ZFMK-TIS-cE844	GU981558 GU981509
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: Cáceres, NE Plasencia, S Hervás, Pto. de Honduras; N40°13'17" W05°52'19", 1436m; Cytisus, 2009	ZFMK-DNA-JJ0817, ZFMK-TIS-cE859	GU988553 GU988114
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: León, NE León, NE Riaño, Pto. de Pandetrave; N43°06'24" W04°52'35", 1560m; Cytisus, 2009	ZFMK-DNA-JJ0830, ZFMK-TIS-cE873	GU988563 GU988124
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: Salamanca, NW Béjar, NW Monforte de la Sierra, Peña de Francia, near cloister; N40°31'01" W06°10'15", 1636m; Cytisus, 2009	ZFMK-DNA-JJ0807, ZFMK-TIS-cE849	GU988546 GU988107
Kyklioacalles reinosae (H. Brisout de Barneville 1867); KYKrei	SPAIN: Salamanca, 7 km SE Béjar, Sierra de Candelario, La Covatilla; N40°21'26" W05°41'06", 1951m; Cytisus purgans, 2004, Stüben	ZFMK-DNA-JJ0370, ZFMK-TIS-cE475	GU988310 GU987887
Kyklioacalles roboris (Curtis 1834); KYKrob	ANDORRA: Arinsal; N42°34'15" E01°29'06", 1456m; Corylus avellana, Ruscus, Betula, 2008	ZFMK-DNA-JJ0557, ZFMK-TIS-cAND618	GU981547 GU981498
Kyklioacalles roboris (Curtis 1834); KYKrob	CZECH REPUBLIC: W Bohemia (KT), Balkovy, Doubrava Hill (6545), 2008, Kresl	ZFMK-DNA-JJ0765, ZFMK-TIS-cCz799	GU981556 GU981507
Kyklioacalles roboris (Curtis 1834); KYKrob	FRANCE: Isère, 14 km N Grenoble, Massif de la Chartreus, NW Col de Porte; N45°18'40" E05°45'17", 1649m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0168, ZFMK-TIS-cl0037	EU286330 EU286494
Kyklioacalles roboris (Curtis 1834); KYKrob	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0023, ZFMK-TIS-cl0032	GU988170 GU987760
Kyklioacalles roboris (Curtis 1834); KYKrob	FRANCE: Isère, 9 km N Grenoble, Mont St. Martin; N45°16'15" E05°40'13", 719m; Quercus, 2005, Stüben	ZFMK-DNA-JJ0024, ZFMK-TIS-cl0025	GU988171 GU987761
Kyklioacalles roboris (Curtis 1834); KYKrob	GERMANY: Rheinland-Pfalz, Moseltal, 1 km N Treis-Karden; N50°11'08" E07°18'20", 250m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0040, ZFMK-TIS-cM0062	GU981517 GU981469
Kyklioacalles roboris (Curtis 1834); KYKrob	GERMANY: Rheinland-Pfalz, Moseltal, 6 km SE Cochem, above Ediger; N50°05'28" E07°11'01", 270m; Quercus, Carpinus, 2005, Stüben	ZFMK-DNA-JJ0041, ZFMK-TIS-cM0054	GU988183 GU987773
Kyklioacalles roboris (Curtis 1834); KYKrob	FRANCE: Dép. Loire, SW Pélussin, Mont Pilat, Crêt de l'Oeilon; N45°23'21" E04°36'23", 1366m; Fagus, 2009, Stüben	ZFMK-DNA-JJ0905, ZFMK-TIS-cF932	GU988603
Kyklioacalles roboris (Curtis 1834); KYKrob	GERMANY: NRW, N Mönchengladbach, Helenabrunn; N51°13'34" E06°24'00", 60m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0679, ZFMK-TIS-cD670	GU988472 GU988035
Kyklioacalles solaris (Fiori 1903); KYKsol	ITALY: Toscana, Passo del Spino, 3 km E Chiusi della Verna (AR); N43°42'08" E11°57'13", 1000m; Fraxinus, 2001, Stüben	ZFMK-DNA-JJ0368, ZFMK-TIS-cl473	GU981534 GU981486
Kyklioacalles sp. 1; KYKks1	SPAIN: Málaga, 11 km NW Estepona, Sierra Crestellina, Casares; N36°27'06" W05°16'39", 359m; Pistacia lentiscus, Olea, Smilax, 2007	ZFMK-DNA-JJ0271, ZFMK-TIS-cE0210	GU981527 GU981479
Kyklioacalles sp. 2; KYKks2	MOROCCO: Middle Atlas, Ibel bou Iblane; N33°32'44" W4°09'18", 2279m, 2009, Borovec	ZFMK-DNA-JJ0917, ZFMK-TIS-cMO954	GU981566
Kyklioacalles sp. 3; KYKks3	SPAIN: Jaén, Cazorla, El Chorro; N37°50'25" W02°59'24", 1559m; Erinacea anthyllis, 2008	ZFMK-DNA-JJ0534, ZFMK-TIS-cE595	GU981542 GU981493
Kyklioacalles sp. 4; KYKks4	GERMANY: Baden-W., Kaiserstuhl, "Auf dem Eck"; N48°06'32" E07°40'04", 432m; Fagus, Carpinus, Quercus, 2006, Stüben	ZFMK-DNA-JJ0320, ZFMK-TIS-cD0291	GU981531 GU981483



Kyklioacalles sp. 4; KYKks4	SLOVENIA: Slowenien, Sv. Ana env., 20 km NE of Maribor; Fagus, Quercus, 2006, Stejskal	ZFMK-DNA-JJ0321, ZFMK-TIS-cSLO0293	GU981532 GU981484
Kyklioacalles suturatus (Dieckmann 1983); KYKsut	CZECHIA: Moravia mer., Podyji National Park, Havraniky, Podyji NP, Sealsfielduv kamen; Quercus, Corylus, 2006, Stejskal	ZFMK-DNA-JJ0129, ZFMK-TIS-cCZ0156	EU286318 EU286483
Kyklioacalles teter (Boheman 1844); KYKtet	ITALY: Sicilia (PA), 15 km S Bagheria, Monti di Calamigna, Masseria Suvarita; N37°57'08" E13°32'50", 570m; Quercus ilex, Fraxinus, 2006, Stüben	ZFMK-DNA-JJ0130, ZFMK-TIS-cl0157	EU286319 EU286484
Kyklioacalles teter (Boheman 1844); KYKtet	ITALY: Sizilia, Monte Soro; 1830m; Fagus, 2008, Kapp	ZFMK-DNA-JJ0785, ZFMK-TIS-cl827	GU981557 GU981508
Kyklioacalles tidiquinensis Stüben 2002; KYKtid	MOROCCO: Rif, 10 km W Ketama; N34°57'40" W04°40'51", 1600m; Cedrus, Prunus, 2009, Stüben	ZFMK-DNA-JJ0868, ZFMK-TIS-cE911	GU213779 GU213775
Kyklioacalles yestensis Stüben 2003; KYKyes	SPAIN: Albacete, Yeste, Los Prados; N38°20'47" W02°26'32", 1148m; Juglans regia, Quercus ilex, Rubus, 2008	ZFMK-DNA-JJ0532, ZFMK-TIS-cE593	GU981541 GU981492
Lauriacalles acutus (Wollaston 1864); LAUacu	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts., Monte del Agua, Chupadero; N28°19'23" W16°49'12", 940m; Laurus novocanariensis, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0779, ZFMK-TIS-cE816	GU988527 GU988088
Lauriacalles acutus (Wollaston 1864); LAUacu	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0607, ZFMK-TIS-cE680	GU988436 GU987998
Lauriacalles acutus (Wollaston 1864); LAUacu	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Moquinal; N28°31'55" W16°17'24", 840m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0601, ZFMK-TIS-cE674	GU988431 GU987993
Lauriacalles acutus (Wollaston 1864); LAUacu	SPAIN: Canary Islands, La Palma, 1.5 km W La Galga, El Corcho; N28°45'03" W17°45'59", 598m; laurisilva, Juglans, 2006, Stüben	ZFMK-DNA-JJ0279, ZFMK-TIS-cE0219	GU988254 GU987837
Lauriacalles acutus (Wollaston 1864); LAUacu	SPAIN: Canary Islands, La Palma, 2.5 km W La Galga, above Cubo de la Galga; N28°45'18" W17°46'37", 857m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0112, ZFMK-TIS-cC0137	FJ716486 FJ716538
Lauriacalles acutus (Wollaston 1864); LAUacu	SPAIN: Canary Islands, Tenerife, 9 km W La Laguna, Area Recreativa de Jara; N28°27'31" W16°24'07", 870m; laurisilva, 2004, Stüben	ZFMK-DNA-JJ0483, ZFMK-TIS-cE544	GU988355 GU987924
Madeiracalles achadagrandsis (Stüben 2002); MADach	PORTUGAL: Madeira, 3 km NE Prazeres, "Achada Grande"; N32°47'05" W17°11'06", 1189m; Laurissilva, 2008	ZFMK-DNA-JJ0434, ZFMK-TIS-cP532	FJ716499 FJ716550
Madeiracalles cinereus (Wollaston 1860); MADcin	PORTUGAL: Madeira, 4.5 km S São Vicente Boca da Encumeada, "Folhadal"; N32°45'08" W17°01'40", 1004m; Laurissilva, Euphorbia mellifera, 2008	ZFMK-DNA-JJ0428, ZFMK-TIS-cP526	GU988333 GU987905
Madeiracalles cinereus (Wollaston 1860); MADcin	PORTUGAL: Madeira, 4 km SW Santana, Queimadas - Caldeirão Verde; N32°46'49" W16°54'54", 809m; Euphorbia mellifera, 2008, Stüben	ZFMK-DNA-JJ0452, ZFMK-TIS-cP516	FJ716505 FJ716555
Madeiracalles dispar (Wollaston 1854); MADdis	PORTUGAL: Madeira, 3 km NE Prazeres, "Achada Grande"; N32°47'05" W17°11'06", 1189m; Laurissilva, 2008	ZFMK-DNA-JJ0433, ZFMK-TIS-cP531	FJ716498 FJ716549
Madeiracalles machadoi (Stüben 2006); MADmac	PORTUGAL: Madeira, 6 km N Ponta do Sol, Paul da Serra, "Loiral"; N32°44'20" W17°06'09", 1295m; Cytisus scoparius, 2008	ZFMK-DNA-JJ0453, ZFMK-TIS-cP517	FJ716506 FJ716556
Madeiracalles portosantoensis (Stüben 2002); MADpto	PORTUGAL: Madeira, Porto Santo, 3 km N Vila Baleira, Pico Castelo; N33°04'51" W16°19'59", 397m; Quercus ilex, Quercus suber, 2008	ZFMK-DNA-JJ0436, ZFMK-TIS-cP534	FJ716500 FJ716551
Madeiracalles pulverosus (Gemming 1871); MADpul	PORTUGAL: Madeira, 1 km S Curral das Freiras, Eira do Serrado; N32°42'40" W16°57'42", 1040m; Tolpis succulenta, 2008	ZFMK-DNA-JJ0426, ZFMK-TIS-cP524	GU988331 GU987903
Madeiracalles pulverosus (Gemming 1871); MADpul	PORTUGAL: Madeira, 4 km NW Santana, São Jorge; N32°49'59" W16°54'00", 35m; Olea, 2008, Stüben	ZFMK-DNA-JJ0424, ZFMK-TIS-cP512	FJ716494 FJ716545
Madeiracalles pulverosus (Gemming 1871); MADpul	PORTUGAL: Madeira, 4 km NW Santana, São Jorge; N32°49'59" W16°54'00", 35m; Olea, 2008, Stüben	ZFMK-DNA-JJ0448, ZFMK-TIS-cP511	GU988343 GU987915
Madeiracalles pulverosus (Gemming 1871); MADpul	PORTUGAL: Madeira, above Gaula-Camacha, Levada das Tornos, 600m; Tolpis succulenta, 2003, Stüben	ZFMK-DNA-JJ0094, ZFMK-TIS-cP0116	GU988207 GU987792
Madeiracalles saxicola (Wollaston 1854); MADsax	PORTUGAL: Madeira, Machico, Queimado; N32°42'51" W16°46'12", 239m; Euphorbia piscatoria, 2008, Stüben	ZFMK-DNA-JJ0450, ZFMK-TIS-cP514	FJ716504 GU987916
Madeiracalles terminalis (Wollaston 1854); MADter	PORTUGAL: Madeira, 3 km W Porto Moniz, Santa Madalena; N32°51'31" W17°12'11", 391m; Ficus carica, 2008	ZFMK-DNA-JJ0425, ZFMK-TIS-cP519	GU988330 GU987902
Madeiracalles terminalis (Wollaston 1854); MADter	PORTUGAL: Madeira, 6 km N Ponta do Sol, Paul da Serra, "Loiral"; N32°44'20" W17°06'09", 1295m; Cytisus scoparius, 2008	ZFMK-DNA-JJ0454, ZFMK-TIS-cP518	GU988345 GU987918

Madeiracalles terminalis (Wollaston 1854); MADter	PORTUGAL: Madeira, 4 km NW Santana, São Jorge; N32°49'59" W16°54'00", 35m; Olea, 2008, Stüben	ZFMK-DNA-JJ0446, ZFMK-TIS-cP509	GU988342 GU987914
Madeiracalles terminalis (Wollaston 1854); MADter	PORTUGAL: Madeira, 4 km NW Santana, São Jorge; N32°49'59" W16°54'00", 35m; Olea, 2008, Stüben	ZFMK-DNA-JJ0447, ZFMK-TIS-cP510	FJ716502 FJ716553
Madeiracalles tolpis (Stüben 2002); MADtol	PORTUGAL: Madeira, 4 km NW Santana, São Jorge; N32°49'59" W16°54'00", 35m; Tolpis succulenta, 2008, Stüben	ZFMK-DNA-JJ0445, ZFMK-TIS-cP508	GU988341 GU987913
Montanacalles nevadaensis (Stüben 2001); MNTnev	SPAIN: Almería, 11 km NW Laujar de Andarax, Sierra Nevada, Bayárcal; N37°02'27" W03°00'12", 1291m; Quercus ilex, broom, Euphorbia, 2007	ZFMK-DNA-JJ0175, ZFMK-TIS-cE0189	EU286334 EU286498
Onyxacalles balearicus Stüben 2005; ONYbal	SPAIN: Mallorca, 11 km NE Lluc, Sra. de Tramuntana; N39°52'03" E02°58'20", 107m; PT, Smilax aspera, Quercus ilex, 2004, Stüben	ZFMK-DNA-JJ0466, ZFMK-TIS-cE0294	GU988348
Onyxacalles balearicus Stüben 2005; ONYbal	SPAIN: Mallorca, 3 km SE Lluc, Sra. de Tramuntana, Sa Maleta; N39°48'47" E02°53'23", 571m; Quercus ilex, 2004, Stüben	ZFMK-DNA-JJ0207, ZFMK-TIS-cE0168	EU286357 EU286521
Onyxacalles bermejaensis Stüben 2001; ONYber	SPAIN: Málaga, 9 km SE Ubrique, Sierra de Líbar; N36°36'52" W05°23'16", 663m; Quercus ilex, Ceratonia, 2007	ZFMK-DNA-JJ0261, ZFMK-TIS-cE0194	GU988244 GU987827
Onyxacalles bermejaensis Stüben 2001; ONYber	SPAIN: Andalucía, 11 km S Ronda, Sierra de las Nieves; N36°39'51" W05°05'01", 1047m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0198, ZFMK-TIS-cE0167	EU286350 EU286514
Onyxacalles bermejaensis Stüben 2001; ONYber	SPAIN: Málaga, NW Marbella, Sierra de las Nieves; N36°39'52" W05°04'57", 1043m; Quercus ilex, Echinodera spinosa, 2009, Stüben	ZFMK-DNA-JJ0747, ZFMK-TIS-cE778	GU988506 GU988066
Onyxacalles gibraltarensis Stüben 2002; ONYgib	SPAIN: Cádiz, 10 km SW Algeciras, El Bujeo; N36°04'10" W05°31'48", 257m; Quercus suber, 2007	ZFMK-DNA-JJ0268, ZFMK-TIS-cE0206	GU988249 GU987832
Onyxacalles gibraltarensis Stüben 2002; ONYgib	SPAIN: Cádiz, Los Barrios, Alcornocales N.P., between Facinos, Río Las Cañas and Mantera Torero; Olea europaea, 2009, Torres	ZFMK-DNA-JJ0912, ZFMK-TIS-cE949	GU988608
Onyxacalles gibraltarensis Stüben 2002; ONYgib	MOROCCO: Rif, SW Oued-Laou, river, O. Laou; N35°17'47" W05°13'38", 210m; Quercus suber, Smilax, Arbutus, 2009, Stüben	ZFMK-DNA-JJ0854, ZFMK-TIS-cE897	GU988577 GU988137
Onyxacalles gibraltarensis Stüben 2002; ONYgib	MOROCCO: S Ksar-es-Seghir; N35°45'16" W05°30'49", 278m; Pistacia, Quercus suber, 2009, Stüben	ZFMK-DNA-JJ0864, ZFMK-TIS-cE907	GU988584 GU988144
Onyxacalles gibraltarensis Stüben 2002; ONYgib	MOROCCO: W Sebta, vir. Biutz; N35°53'04" W05°24'08", 337m; Quercus suber, Smilax, Arbutus, 2009, Stüben	ZFMK-DNA-JJ0856, ZFMK-TIS-cE899	GU988578 GU988138
Onyxacalles henoni (Bedel 1888); ONYhen	FRANCE: Corsica, Col de Vizzavona, 22 km S Corte; N42°06'45" E09°06'49", 1100m; Fagus, 2001, Stüben	ZFMK-DNA-JJ0882, ZFMK-TIS-cF479	GU988592
Onyxacalles luigionii (A. & F. Solari 1907); ONYlui	FRANCE: Isère, 2 km SE Lans en Vercors, Montagne de Lans; N45°06'45" E05°36'21", 1352m; Abies, Fagus, Fraxinus, 2005, Stüben	ZFMK-DNA-JJ0025, ZFMK-TIS-cl0027	EU286286 EU286451
Onyxacalles luigionii (A. & F. Solari 1907); ONYlui	CROATIA: Dalmatien, 8 km E Karlobag, Velebit Mts., Stupacinovo; N44°32'41" E15°09'58", 1049m; Fagus, 2007, Stüben	ZFMK-DNA-JJ0195, ZFMK-TIS-cHR0339	EU286348 EU286512
Onyxacalles luigionii (A. & F. Solari 1907); ONYlui	FRANCE: Alpes-Maritimes, 3 km W Sospel, Col de Braus; N43°52'34" E07°24'17", 1051m; Quercus pubescens, Ostrya carpinifolia, broom, 2007, Stüben	ZFMK-DNA-JJ0411, ZFMK-TIS-cF440	GU988325 GU987897
Onyxacalles luigionii (A. & F. Solari 1907); ONYlui	ITALY: Basilicata, Monte Pollino, 9 km SE Rotonda, Rif. de Gasperi; N39°54'37" E16°07'15", 1486m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0577, ZFMK-TIS-cl638	GU988418 GU987979
Onyxacalles luigionii (A. & F. Solari 1907); ONYlui	ITALY: Campania, Cilento, 6 km SE Vallo d. Lucania, M. Sacro o Gelbison; N40°12'41" E15°19'42", 1544m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0561, ZFMK-TIS-cl622	GU988407 GU987967
Onyxacalles luigionii (A. & F. Solari 1907); ONYlui	ITALY: Campania, Monti Picentini, 9 km N Acerno, Piano Laceno; N40°48'58" E15°07'35", 1210m; Fagus, 2008, Stüben	ZFMK-DNA-JJ0574, ZFMK-TIS-cl635	GU988417 GU987977
Onyxacalles maginaensis Stüben 2004; ONYmag	SPAIN: Teruel, S. Javalambre, Fuente la Risca near Arcos de las Salinas; N39°59'56" W01°01'21", 1121m; Amelanchier ovalis, Acer monspessulanum, Erinacea anthyllis, Ulex, 2008	ZFMK-DNA-JJ0541, ZFMK-TIS-cE602	GU988390 GU987950
Onyxacalles maginaensis Stüben 2004; ONYmag	SPAIN: Almería, 11 km NW Laujar de Andarax, Sierra Nevada, Bayárcal; N37°02'27" W03°00'12", 1291m; Quercus ilex, 2007	ZFMK-DNA-JJ0257, ZFMK-TIS-cE0187	submitted to GenBank
Onyxacalles maginaensis Stüben 2004; ONYmag	SPAIN: Andalucía, 28 km E Jaén, Sierra Magina; N37°43'21" W03°29'11", 1600m; Quercus ilex, 2005, Stüben	ZFMK-DNA-JJ0147, ZFMK-TIS-cE0169	EU286327 EU286491
Onyxacalles neglectus Kulbe 1999; ONYneg	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0640, ZFMK-TIS-cE713	FJ716525 GU988014
Onyxacalles portusveneris (Mayet	FRANCE: Gard, 15 km NE Nimes, Pont du Gard, Collias; N43°57'03" E04°28'59", 68m; Quercus ilex,	ZFMK-DNA-JJ0144, ZFMK-TIS-cF0166	EU286326 EU286490

1903); ONYpor	2006, Stüben		
Onyxacalles portusveneris (Mayet 1903); ONYpor	MOROCCO: High Atlas, E Marrakech, N Taddert, (near Tazouguerte); N31°28'07" W07°24'59", 1727m; Quercus, 2009, Stüben	ZFMK-DNA-JJ0846, ZFMK-TIS-cE889	GU988573 GU988133
Onyxacalles portusveneris (Mayet 1903); ONYpor	MOROCCO: M-Atlas, 10 km S Ain-Leuh; N33°13'48" W05°20'50", 1700m; Quercus ilex, Rubus, Cedrus, 2002, Stüben	ZFMK-DNA-JJ0376, ZFMK-TIS-cM481	GU988312
Onyxacalles portusveneris (Mayet 1903); ONYpor	MOROCCO: Middle Atlas, S Azrou, Äin Leuh; N33°16'50" W05°20'18", 1582m; Quercus ilex, Euphorbia, 2009, Stüben	ZFMK-DNA-JJ0847, ZFMK-TIS-cE890	GU988574 GU988134
Onyxacalles portusveneris (Mayet 1903); ONYpor	MOROCCO: Middle Atlas, S Azrou, S Äin Leuh; N33°14'57" W05°21'04", 1715m; Quercus ilex, 2009, Stüben	ZFMK-DNA-JJ0848, ZFMK-TIS-cE891	GU988575 GU988135
Onyxacalles portusveneris (Mayet 1903); ONYpor	MOROCCO: Rif Mts., 10km W Ketama = Issague; N34°57'40" W04°40'51", 1600m; Prunus lusitania, 2001, Stüben	ZFMK-DNA-JJ0375, ZFMK-TIS-cM480	GU988311
Onyxacalles portusveneris (Mayet 1903); ONYpor	MOROCCO: Rif, 10 km W Ketama; N34°57'40" W04°40'51", 1600m; Cedrus, Prunus, 2009, Stüben	ZFMK-DNA-JJ0869, ZFMK-TIS-cE912	GU988587 GU988147
Onyxacalles ringeli Kulbe 1999; ONYrin	SPAIN: Canary Islands, La Palma, Cumbre Nueva, 4,5 km SE El Paso, El Pilar; N28°37'37" W17°49'45", 1432m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0087, ZFMK-TIS-cC0171	EU286300 EU286465
Onyxacalles sp.; ONYsp1	MOROCCO: High Atlas, 59 km SE Marrakech; N31°28'19" W07°24'22", 1500m; Quercus ilex, Quercus suber, 2002, Stüben	ZFMK-DNA-JJ0472, ZFMK-TIS-cM482	GU988350 GU987922
Onyxacalles valencianus Germann 2005; ONYval	SPAIN: Barcelona, above dry river bed, near Vallirana; N41°22'36" E01°55'02", 245m; Quercus ilex, Ficus carica, Smilax aspera, 2008	ZFMK-DNA-JJ0551, ZFMK-TIS-cE612	GU988398 GU987958
Onyxacalles valencianus Germann 2005; ONYval	SPAIN: Barcelona, S. Montseny, Tordera valley, near St. Marçal; N41°48'01" E02°25'15", 1060m, 2008	ZFMK-DNA-JJ0553, ZFMK-TIS-cE614	GU988400 GU987960
Onyxacalles valencianus Germann 2005; ONYval	SPAIN: Castellón, Morella, Barranco de la Bota; N40°33'12" W00°00'27", 814m; Quercus ilex, Hedera helix, 2008	ZFMK-DNA-JJ0546, ZFMK-TIS-cE607	GU988393 GU987953
Onyxacalles valencianus Germann 2005; ONYval	SPAIN: Alicante, 7 km SW Alcoi, Sierra de Menechaor, Santurio de la Font Roja; N38°39'34" W00°32'29", 1296m; Quercus ilex, 2007	ZFMK-DNA-JJ0172, ZFMK-TIS-cE0180	EU286331 EU286495
Onyxacalles verrucosus (Wollaston 1863); ONYver	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts., Monte del Agua, Chupadero; N28°19'23" W16°49'12", 940m; Laurus novocanariensis, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0776, ZFMK-TIS-cE813	GU988524 GU988085
Onyxacalles verrucosus (Wollaston 1863); ONYver	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0605, ZFMK-TIS-cE678	GU988434 GU987996
Onyxacalles verrucosus (Wollaston 1863); ONYver	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Moquinal; N28°31'55" W16°17'24", 840m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0604, ZFMK-TIS-cE677	GU988433 GU987995
Onyxacalles verrucosus (Wollaston 1863); ONYver	SPAIN: Canary Islands, El Hierro, 7 km W La Frontera, Pista Derrabado; N27°44'29" W18°03'24", 895m; Laurus azorica, 2006, Stüben	ZFMK-DNA-JJ0137, ZFMK-TIS-cC0170	EU286324 EU286488
Onyxacalles verrucosus (Wollaston 1863); ONYver	SPAIN: Canary Islands, Tenerife, 4 km S Los Silos, Teno Mts., Monte del Agua; N28°19'20" W16°49'14", 700m; laurisilva, 2003, Stüben	ZFMK-DNA-JJ0510, ZFMK-TIS-cE571	GU988373 GU987938
Onyxacalles verrucosus (Wollaston 1863); ONYver	SPAIN: Canary Islands, Tenerife, 6 km N La Laguna, Monte de las Mercedes; N28°31'50" W16°17'09", 950m; laurisilva, 2003, Stüben	ZFMK-DNA-JJ0509, ZFMK-TIS-cE570	GU987937
Paratomeuma orbatum (Wollaston 1865); PAOorm	SPAIN: Canary Islands, La Gomera, Hermigua, Ibo Alfaro; N28°09'58" W17°12'11", 255m; Persea, 2008, Astrin & Stüben	ZFMK-DNA-JJ0660, ZFMK-TIS-cE733	FJ716532 FJ716580
Paratyphloporus karamani (Formánek 1912); PAYkar	CROATIA: Dalmatien, 21 km E Split, Mosor Mts, N Omis, Gata; N43°27'59" E16°41'40", 280m; Olea, Quercus, Carpinus, 2007, Stüben	ZFMK-DNA-JJ0188, ZFMK-TIS-cHR0312	EU286342 EU286506
Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro; N28°08'18" W17°12'52", 791m; Sonchus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0664, ZFMK-TIS-cE737	FJ716533 FJ716581
Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m; Sonchus gomerensis, 2008, Astrin & Stüben	ZFMK-DNA-JJ0655, ZFMK-TIS-cE728	GU988460 GU988023
Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Las Bodegas; N28°33'42" W16°09'25", 502m; Sonchus acaulis, 2008, Astrin & Stüben	ZFMK-DNA-JJ0614, ZFMK-TIS-cE687	GU988440 GU988002
Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, El Hierro, 9,5 km W La Frontera, Pista de Mencafitte; N27°44'06" W18°05'08", 929m; Pericallis murrayi, 2006, Stüben	ZFMK-DNA-JJ0105, ZFMK-TIS-cC0128	GU988211 GU987796
Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, La Gomera, 7 km NW San Sebastian, Las Casetas; N28°07'44" W17°09'17", 660m, 2004, Stüben	ZFMK-DNA-JJ0513, ZFMK-TIS-cE574	GU988376

Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, Tenerife, 1 km S Los Silos; N28°21'16" W16°48'49", 300-400m; Sonchus spp., Aeonium tabulaeforme, 2003, Stüben	ZFMK-DNA-JJ0512, ZFMK-TIS-cE573	GU988375 GU987939
Pseudodichromacalles fernandezi (Roudier 1954); PSDfer	SPAIN: Canary Islands, Tenerife, Anaga Mts., 10 km NE La Laguna, Afur; N28°33'10" W16°14'59", 300m; Aeonium cuneatum, 2003, Stüben	ZFMK-DNA-JJ0511, ZFMK-TIS-cE572	GU988374
Silvacalles cedroensis (Kulbe 2000); SILced	SPAIN: Canary Islands, La Gomera, S Hermigua, El Cedro, Las Mimbreras; N28°07'27" W17°13'26", 901m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0643, ZFMK-TIS-cE716	FJ716526 FJ716574
Silvacalles cedroensis (Kulbe 2000); SILced	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; Ocotea foetens, 2008, Astrin & Stüben	ZFMK-DNA-JJ0648, ZFMK-TIS-cE721	GU988456 GU988019
Silvacalles hakani tagasaste (Stüben 2000); SILtag	SPAIN: Canary Islands, La Palma, 11 km NE El Paso, Mt. Tagoja; N28°43'18" W17°47'07", 1047m; laurisilva, Chamaecytisus proliferus, 2006, Stüben	ZFMK-DNA-JJ0154, ZFMK-TIS-cC0106	FJ716488 FJ716540
Silvacalles instabilis (Wollaston 1864); SILins	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Las Mercedes; N28°31'49" W16°17'12", 905m; laurisilva, 2008, Floren	ZFMK-DNA-JJ0619, ZFMK-TIS-cE692	GU988441 GU988003
Silvacalles instabilis (Wollaston 1864); SILins	SPAIN: Canary Islands, Tenerife, SW Los Silos, Teno Mts., Monte del Agua, Chupadero; N28°19'23" W16°49'12", 940m; Persea indica, 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0777, ZFMK-TIS-cE814	GU988525 GU988086
Silvacalles instabilis (Wollaston 1864); SILins	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0608, ZFMK-TIS-cE681	GU988437 GU987999
Silvacalles instabilis (Wollaston 1864); SILins	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0611, ZFMK-TIS-cE684	GU988438 GU988000
Silvacalles instabilis (Wollaston 1864); SILins	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Moquinal; N28°31'55" W16°17'24", 840m; laurisilva, 2008, Astrin & Stüben	ZFMK-DNA-JJ0602, ZFMK-TIS-cE675	GU988432 GU987994
Silvacalles instabilis (Wollaston 1864); SILins	SPAIN: Canary Islands, Tenerife, Teno Mt., 3,5 km SE Erjos, near Ruigomez; N28°20'00" W16°47'10", 500m; Laurus, 2005, Stüben	ZFMK-DNA-JJ0111, ZFMK-TIS-cC0136	EU286309 EU286474
Silvacalles lepidus (Kulbe 2000); SILlep	SPAIN: Canary Islands, La Palma, 1,5 km W La Galga, El Corcho; N28°45'03" W17°45'59", 598m; laurisilva, Juglans, 2006, Stüben	ZFMK-DNA-JJ0312, ZFMK-TIS-cE0271	GU988281 GU987864
Silvacalles lepidus (Kulbe 2000); SILlep	SPAIN: Canary Islands, La Palma, 11 km NE El Paso, Mt. Tagoja; N28°43'18" W17°47'07", 1047m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0311, ZFMK-TIS-cE0269	GU988280 GU987863
Silvacalles lepidus (Kulbe 2000); SILlep	SPAIN: Canary Islands, La Palma, 7 km SE El Paso, San Isidro; N28°38'22" W17°47'54", 624m; Laurus azorica, 2006, Stüben	ZFMK-DNA-JJ0110, ZFMK-TIS-cC0135	EU286308 EU286473
Silvacalles lunulatus (Wollaston 1854); SILlun	PORTUGAL: Madeira, 3 km NE Prazeres, "Achada Grande"; N32°47'05" W17°11'06", 1189m; Laurissilva, 2008	ZFMK-DNA-JJ0435, ZFMK-TIS-cP533	GU988335 GU987907
Silvacalles lunulatus (Wollaston 1854); SILlun	PORTUGAL: Madeira, 3 km S Seixal, Ribeira do Seixal; N32°47'42" W17°06'50", 516m; Laurus azorica, 2008	ZFMK-DNA-JJ0427, ZFMK-TIS-cP525	GU988332 GU987904
Silvacalles lunulatus (Wollaston 1854); SILlun	PORTUGAL: Madeira, 4,5 km S São VicentBoca da Encumeada, "Folhadal"; N32°45'08" W17°01'40", 1004m; Laurissilva, Euphorbia mellifera, 2008	ZFMK-DNA-JJ0429, ZFMK-TIS-cP527	GU988334 GU987906
Silvacalles lunulatus (Wollaston 1854); SILlun	PORTUGAL: Madeira, 7 km S Santana, Fajã da Nogueira; N32°44'34" W16°53'40", 514m; Laurus azorica, 2008, Stüben	ZFMK-DNA-JJ0449, ZFMK-TIS-cP513	FJ716503 FJ716554
Silvacalles mundus (Wollaston 1964); SILmun	SPAIN: Canary Islands, La Palma, 1,5 km W La Galga, El Corcho; N28°45'03" W17°45'59", 598m; laurisilva, Juglans, 2006, Stüben	ZFMK-DNA-JJ0313, ZFMK-TIS-cE0272	GU988282 GU987865
Silvacalles mundus (Wollaston 1964); SILmun	SPAIN: Canary Islands, La Palma, 2,5 km W La Galga, above Cubo de la Galga; N28°45'18" W17°46'37", 857m; laurisilva, Juglans regia, 2006, Stüben	ZFMK-DNA-JJ0108, ZFMK-TIS-cC0133	EU286307 EU286472
Silvacalles mundus (Wollaston 1964); SILmun	SPAIN: Canary Islands, La Palma, 3 km SE Garafía, Montaña de las Varas; N28°49'11" W17°54'48", 919m; laurisilva, 2006, Stüben	ZFMK-DNA-JJ0310, ZFMK-TIS-cE0268	GU988279 GU987862
Silvacalles mundus (Wollaston 1964); SILmun	SPAIN: Canary Islands, La Palma, 7 km SE El Paso, San Isidro; N28°38'22" W17°47'54", 624m; Laurus azorica, 2006, Stüben	ZFMK-DNA-JJ0109, ZFMK-TIS-cC0134	GU988212 GU987797
Silvacalles nubilosus (Wollaston 1864); SILnub	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. near Chinobre; N28°33'21" W16°10'46", 808m; Laurus, Ixanthus viscosus, 2008, Astrin & Stüben	ZFMK-DNA-JJ0609, ZFMK-TIS-cE682	FJ716514 FJ716563
Silvacalles nubilosus (Wollaston 1864); SILnub	SPAIN: Canary Islands, Tenerife, 11 km NO Laguna, Anaga Mts., near "Roque de los Pasos"; N28°32'25"	ZFMK-DNA-JJ0071, ZFMK-TIS-cC0088	GU988199 GU987785

	W16°13'30", 870m; <i>Ixanthus viscosus</i> , 2004, Stüben		
Silvacalles nubilosus (Wollaston 1864); SILnub	SPAIN: Canary Islands, Tenerife, Teno Mt., Monte del Agua, 4 km S Erjos; N28°19'20" W16°49'14", 700m; <i>Ixanthus viscosus</i> , 2005, Stüben	ZFMK-DNA-JJ0497, ZFMK-TIS-cE558	GU988368 GU987932
Silvacalles pedestris (Stüben 2000); SILped	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; <i>Ocotea foetens</i> , 2008, Astrin, Stüben, Behne & Floren	ZFMK-DNA-JJ0775, ZFMK-TIS-cE810	GU988523 GU988084
Silvacalles pedestris (Stüben 2000); SILped	SPAIN: Canary Islands, La Gomera, S Vallehermoso, La Meseta, "La Piedra Encantada"; N28°09'15" W17°17'36", 819m; <i>Ocotea foetens</i> , 2008, Astrin & Stüben	ZFMK-DNA-JJ0650, ZFMK-TIS-cE723	FJ716528 FJ716576
Silvacalles pedestris (Stüben 2000); SILped	SPAIN: Canary Islands, Tenerife, S Orotava, Orotava valley, Mirador de la Rosa; N28°20'27" W16°31'31", 1503m; <i>Chamaecytisus proliferus</i> , 2008, Astrin & Stüben	ZFMK-DNA-JJ0638, ZFMK-TIS-cE711	GU988451 GU988013
Silvacalles pedestris (Stüben 2000); SILped	SPAIN: Canary Islands, El Hierro, 9,5 km W La Frontera, Pista de Mencafit; N27°44'06" W18°05'08", 929m; <i>Chamaecytisus</i> , <i>Ficus</i> , 2006, Stüben	ZFMK-DNA-JJ0156, ZFMK-TIS-cC0108	GU988221 GU987804
Silvacalles pedestris (Stüben 2000); SILped	SPAIN: Canary Islands, La Palma, 11 km NE El Paso, Mt. Tagoja; N28°43'18" W17°47'07", 1047m; <i>laurisilva</i> , <i>Chamaecytisus proliferus</i> , 2006, Stüben	ZFMK-DNA-JJ0155, ZFMK-TIS-cC0107	GU988220 GU987803
Silvacalles pedestris (Stüben 2000); SILped	SPAIN: Canary Islands, Tenerife, Valle Orotava, 5 km S Orotava, "Bermeja"; N28°20'28" W16°31'34", 1500m; <i>Chamaecytisus proliferus</i> , 2003, Stüben	ZFMK-DNA-JJ0494, ZFMK-TIS-cE555	GU988365
Silvacalles tolpiworus (Germann & Stüben 2006); SILtov	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m; <i>Tolpis proustii</i> , 2008, Astrin & Stüben	ZFMK-DNA-JJ0654, ZFMK-TIS-cE727	FJ716530 FJ716578
Silvacalles tolpiworus (Germann & Stüben 2006); SILtov	SPAIN: Canary Islands, La Gomera, 2,5 km E Hermigua; N28°09'30" W17°09'46", 650m; <i>Tolpis cf. proustii</i> , 2004, Stüben	ZFMK-DNA-JJ0095, ZFMK-TIS-cC0117	GU988208 GU987793
Sonchialcalles muelleri (Stüben 2000); SONmue	SPAIN: Canary Islands, El Hierro, 3 km N San Andres, N-Hang Montaña de la Fara; N27°47'39" W17°56'55", 936m; <i>Tolpis lacinata</i> , 2006, Stüben	ZFMK-DNA-JJ0093, ZFMK-TIS-cC0113	GU988206 GU987791
Sonchialcalles muelleri (Stüben 2000); SONmue	SPAIN: Canary Islands, El Hierro, 3 km SW La Frontera, road to Frontera; N27°44'06" W18°00'13", 1302m; <i>Tolpis proustii</i> , 2006, Stüben	ZFMK-DNA-JJ0140, ZFMK-TIS-cC0114	GU988215 GU987798
Sonchialcalles muelleri (Stüben 2000); SONmue	SPAIN: Canary Islands, La Palma, 4,5 km E Puntagorda, Lomo de la Ciudad; N28°46'24" W17°56'16", 1241m; <i>Tolpis lagopoda</i> , 2006, Stüben	ZFMK-DNA-JJ0293, ZFMK-TIS-cE0246	GU988266 GU987848
Sonchialcalles muelleri (Stüben 2000); SONmue	SPAIN: Canary Islands, La Palma, 6 km N Las Caletas, Cumbre Vieja; N28°32'15" W17°49'42", 1212m; <i>Tolpis calderae</i> , 2006, Stüben	ZFMK-DNA-JJ0092, ZFMK-TIS-cC0112	FJ716485 FJ716537
Sonchialcalles muelleri (Stüben 2000); SONmue	SPAIN: Canary Islands, La Palma, 7,5 km E Garafía, Bco. de los Hombres; N28°49'50" W17°52'03", 386m; <i>Tolpis lagoboda/laciniata</i> , 2006, Stüben	ZFMK-DNA-JJ0292, ZFMK-TIS-cE0245	GU988265 GU987847
Sonchialcalles silosensis (Stüben 2000); SONsil	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m; <i>Sonchus gomerensis</i> , 2008, Astrin & Stüben	ZFMK-DNA-JJ0656, ZFMK-TIS-cE729	FJ716531 FJ716579
Sonchialcalles silosensis (Stüben 2000); SONsil	SPAIN: Canary Islands, La Gomera, 2,5 km E Hermigua; N28°09'30" W17°09'46", 650m; <i>Sonchus hierrensis</i> , 2004, Stüben	ZFMK-DNA-JJ0091, ZFMK-TIS-cC0111	GU988205
Sonchialcalles silosensis (Stüben 2000); SONsil	SPAIN: Canary Islands, Tenerife, 1 km S Los Silos; N28°21'16" W16°48'49", 300-400m; <i>Sonchus sp.</i> , 2003, Stüben	ZFMK-DNA-JJ0490, ZFMK-TIS-cE551	GU988362 GU987929
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, La Gomera, SE Hermigua, near Casas de Palmar; N28°09'29" W17°09'37", 627m; <i>Sonchus gomerensis</i> , 2008, Astrin & Stüben	ZFMK-DNA-JJ0653, ZFMK-TIS-cE726	GU988459 GU988022
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, Tenerife, E Los Silos, Teno Mts. El Tanque Bajo; N28°21'39" W16°46'19", 534m, 2008, Astrin & Stüben	ZFMK-DNA-JJ0626, ZFMK-TIS-cE699	FJ716520 FJ716569
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, Tenerife, NE La Laguna, Anaga Mts. Las Bodegas; N28°33'42" W16°09'25", 502m; <i>Sonchus acaulis</i> , 2008, Astrin & Stüben	ZFMK-DNA-JJ0612, ZFMK-TIS-cE685	GU988439 GU988001
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, Tenerife, W Los Silos, Teno Mts. Casa Blanca near Buenavista del Norte; N28°21'36" W16°52'10", 231m; 2008, Astrin & Stüben	ZFMK-DNA-JJ0624, ZFMK-TIS-cE697	GU988444 GU988006
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, La Gomera, 2,5 km E Hermigua; N28°09'30" W17°09'46", 650m; <i>Aeonium</i> , <i>Sonchus sp.</i> , <i>Sonchus hierrensis</i> , 2004, Stüben	ZFMK-DNA-JJ0492, ZFMK-TIS-cE553	GU988364
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, La Palma, 6 km E Garafía, 3 km S El Tablado; N28°49'42" W17°52'43", 404m; <i>Sonchus palmensis</i> , 2006, Stüben	ZFMK-DNA-JJ0082, ZFMK-TIS-cC0110	GU988202 GU987787
Sonchialcalles sonchi (Stüben 2000); SONson	SPAIN: Canary Islands, Tenerife, Anaga Mts., 10 km NE La Laguna, Afur; N28°33'10" W16°14'59", 300m; <i>Sonchus acaulis</i> , 2003, Stüben	ZFMK-DNA-JJ0491, ZFMK-TIS-cE552	GU988363 GU987930

Torneuma caecum Wollaston 1860; TORcae	PORTUGAL: Madeira, 1 km S Curral das Freiras, Seara Velha; N32°42'35" W16°58'17", 384m; Ficus carica, 2008	ZFMK-DNA-JJ0458, ZFMK-TIS-cP523	FJ716509 FJ716559
Torneuma deplanatum deplanatum (Hampe 1864); TORdep	GREECE: Korfu, 18 km N Kerkyra, Loutses, Megali Grava; N39°46'38" E19°53'21", 479m; Quercus pubescens, Laurus nobilis, Asphodelus, 2007, Stüben	ZFMK-DNA-JJ0335, ZFMK-TIS-cK00371	GU988291 GU987874
Torneuma deplanatum deplanatum (Hampe 1864); TORdep	ITALY: Sicilia (PA), 10 km W Palermo, Monte Cuccio, Pass Torretta; N38°07'47" E13°14'55", 577m; Asphodelus albus, 2006, Stüben	ZFMK-DNA-JJ0090, ZFMK-TIS-cl0175	GU988204 GU987790
Torneuma deplanatum deplanatum (Hampe 1864); TORdep	ITALY: Sicilia (PA), 8 km S Carini, W M. Gibilmesi; N38°04'03" E13°11'37", 539m; Asphodelus albus, 2006, Stüben	ZFMK-DNA-JJ0203, ZFMK-TIS-cl0305	EU286354 EU286518
Torneuma deplanatum deplanatum (Hampe 1864); TORdep	ITALY: Sicilia (PA), 6 km SW Carini, Montagna Longa; N38°07'10" E13°08'31", 647m; Asphodelus albus, 2006	ZFMK-DNA-JJ0089, ZFMK-TIS-cl0174	<hr/> GU987789
Torneuma desilvai Osella & Zuppa 1998; TORdes	PORTUGAL: Madeira, São Vicent; N32°47'51" W17°02'33", 85m; Laurus azorica, 2008	ZFMK-DNA-JJ0431, ZFMK-TIS-cP529	FJ716496 FJ716547
Torneuma maderense Stüben 2002; TORmad	PORTUGAL: Madeira, 3,5 km W Porto Moniz, Santa Madalena; N32°51'25" W17°12'18", 296m; Ficus carica, 2008	ZFMK-DNA-JJ0457, ZFMK-TIS-cP522	FJ716508 FJ716558
Torneuma mesegueri lineaensis Stüben 2009; TORlin	SPAIN: Cádiz, La Línea, Sierra Carbonera, between Puerto Higuierón and Zabal Alto; Pistacia lentiscus, 2008, Torres	ZFMK-DNA-JJ0709, ZFMK-TIS-cE788	GU988485 GU988047
Torneuma picocasteloense Stüben 2002; TORpcc	PORTUGAL: Madeira, Porto Santo, 2,5 km N Vila Baleira, Pico Castelo - Pico do Facho; N33°04'27" W16°19'25", 146m; Cynara cardunculus, 2008	ZFMK-DNA-JJ0437, ZFMK-TIS-cP535	FJ716501 FJ716552
Torneuma sp. 1; TORts1	SPAIN: Málaga, E Málaga, Macharaviaya; N36°45'54" W04°12'47", 218m; Olea europaea, Ulex, 2009, Stüben	ZFMK-DNA-JJ0711, ZFMK-TIS-cE758	GU988487 GU988048
Torneuma torresi Stüben 2009; TORtor	SPAIN: Cádiz, La Línea, Sierra Carbonera, Puerto Higuierón; Chamaerops humilis, 2008, Torres	ZFMK-DNA-JJ0710, ZFMK-TIS-cE789	GU988486 <hr/>

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## Appendix 2

Sampled genera of western Palaeartic Cryptorhynchinae are listed along with the total number of currently valid species (spp#; as of 2010) and the number of species analyzed in this study ("here"). Distributions of the genera are given; in parentheses: only a few of the species within this genus occur here.

<b>Genus</b>	<b>spp#</b>	<b>here</b>	<b>Distribution</b>
<i>Acalles</i>	49	37	western Palaeartic, (Canaries, Madeira)
<i>Acallobrates</i>	4	3	eastern and southern Europe (southern Central Europe)
<i>Acallorneuma</i>	9	2	Southern Europe, (North Africa)
<i>Aeoniacalles</i>	5	4	Canaries, (Selvagens)
<i>Calacalles</i>	18	17	Canaries, Madeira, Azores, (coasts of North Africa, Portugal & Mallorca)
<i>Canariacalles</i>	2	1	Canaries
<i>Coloracalles</i>	1	1	Southern Europe, North Africa
<i>Cryptorhynchus</i>	1*	1	Nearctic (*: only 1 western Palaeartic species)
<i>Dendroacalles</i>	7	6	Canaries, Madeira
<i>Dichromacalles</i>	11	8	Southern Europe, North Africa, (Canaries, Madeira, Azores)
<i>Echiomacalles</i>	1	1	Canaries: Tenerife & La Gomera
<i>Echinodera</i>	88	55	circummediterranean, Canaries, (eastern Palaeartic)
<i>Elliptacalles</i>	2	2	Southern Europe, North Africa
<i>Ficusacalles</i>	3	2	western Canaries, Selvagens
<i>Kyklioacalles</i>	40	31	western Palaeartic
<i>Lauriacalles</i>	1	1	Canaries: Tenerife & La Palma
<i>Madeiracalles</i>	16	9	Madeira
<i>Montanacalles</i>	1	1	southern Spain
<i>Onyxacalles</i>	18	12	southern & eastern Europe, North Africa, (Southern Europe)
<i>Paratorneuma</i>	5	1	Canaries
<i>Paratyphloporus</i>	4	1	Southern Europe
<i>Pseudodichromacalles</i>	1	1	Canaries
<i>Silvacalles</i>	10	9	Canaries, (Madeira)
<i>Sonchiacalles</i>	3	3	Canaries
<i>Torneuma</i>	50	8	Southern Europe, (Madeira)





Echinodera orbiculata	2									
Echinodera paganettii	4	2	3	3	4	4	4	4	4	yes
Echinodera personata	2									
Echinodera roudieri	2	2	2	2	2	2	2	2	2	yes
Echinodera spinosa	4	2	2	2	3	2	2	2	2	
Echinodera variegata	2	2	2	2	2	2	2	2	2	yes
Echiumacalles anagaensis	2		2		2					
Elliptacalles longus	4	2	4	3	4	4	4	4	4	yes
Ficusacalles senilis ficvorator	2									yes
Kyklioacalles anthyllis	3			2						3
Kyklioacalles aubei	3		2	3	2	2	3	2	2	
Kyklioacalles bupleuri	3	2	2	2	2	2	2	2	2	yes
Kyklioacalles navieresi	2									
Kyklioacalles olceseii	3	2	3	3	3	3	3	3	3	yes
Kyklioacalles provincialis	2		2		2	2	2	2	2	
Kyklioacalles punctaticollis meteoricus	2	2	2	2	2	2	2	2	2	
Kyklioacalles punctaticollis punctaticollis	4	3	4	2	3	3	3	3	4	
Kyklioacalles pyrenaeus	2	2	2	2	2	2	2	2	2	
Kyklioacalles reinosae	4	3	3	3	3	3	3	3	3	
Onyxacalles luigionii	3	3	3	3	3	3	3	3	3	yes
Onyxacalles maginaensis	2	2	2	2	2	2	2	2	2	
Onyxacalles verrucosus				2						
Pseudodichromacalles fernandezi	4		3	2	3	2	2	2	3	yes?
Silvacalles mundus	2									
Silvacalles pedestris	5		3	2	3	3	3	3	3	yes
Sonchiacalles muelleri	2									
Sonchiacalles sonchi	5		4	2	4	3	3	3	3	
	<b>TCS CO1</b>	<b>TCS 16S</b>	<b>dist. clust. CO1</b>	<b>dist. clust. 16S</b>	<b>GMYC PhyML abs.</b>	<b>GMYC PhyML rel.</b>	<b>GMYC RAxML</b>	<b>GMYC Bayes best</b>	<b>morphologically plausible?</b>	
<b>LUMPING</b>										
ACAalc + ACAcaz		x								
ACAasn + ACAtes		x								
ACamar + ACAct	x									
ACAct + ACamar + ACamon + ACAsar				x			x			
ACAct + ACamar + ACamon + ACAsar + ACAsie		x								
ACAct + ACamon + ACamar			x		x	x		x		
ACapar + ACatem		x		x			x	x		yes
ACNdod + ACNsab		x								yes
CALazo + CALdru	x	x	x	x	x	x	x	x		(yes)
CALher + CALset		x								
CALmts + CALpam + CALsp1		x								
CALpum + CALwol		x		x		x	x	x		
DENfor + DENorn + DENsig			x		x	x		x		yes
DENfor + DENorn + DENrut + DENsig	x	x		x			x			
ECAana + FICsen + FICfic		x								
EHCab + ECHdit	x	x	x	x	x	x	x	x		
EHCcre + ECHten				x			x			
EHCcre + ECHten + ECHgci		x								
ECHhys + ECHpal				x	x					
ECHhys + ECHpsh			x							

ECHhys + ECHpal + ECHpsh		x			x		x		
ELLbae + ELLlon	x	x	x	x	x	x	x	x	
KYKapo + KYKeup		x							
KYKmet + KYKpun		x		x					
KYKpla + KYKant		x							
KYKtet + KYKcha + KYKsp1		x							
MADcin + MADter			x	x	x	x	x	x	
MADter + MADtol	x				n/a	n/a	n/a	n/a	yes
MADcin + MADtol + MADter		x			n/a	n/a	n/a	n/a	
ONYbal + ONYval		x		x					
ONYmag + ONYpor + ONYsp1	x	x	x	x	x	x	x	x	yes (in part)
SILins + SILnub	x								
SILced + SILins + SILlep + SILnub			x		x	x	x	x	
SILced + SILins + SILlep + SILlun + SILnub				x					
SILced + SILins + SILlep + SILlun + SILmun + SILnub + SILtov		x							

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#### Appendix 4

Results of distance-based clustering of CO1 and 16S. Ordinate: number of clusters; abscissa: divergence threshold used for clustering. The blue curve depicts the total number of clusters while the pink line represents those clusters corresponding to the morphospecies so far defined. The highest correspondence with morphospecies was found in 3% (CO1) and 1% (16S).

