

# Generating Knowledge Networks from Phenotypic Descriptions

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**Financial Support:** Work partially financed 2 by CNPq (134205/2015-4), FAPESP (2014/14890-0), FAPESP/Cepid in Computational Engineering and Sciences (2013/08293-7), the Microsoft Research FAPESP Virtual Institute (NavScales project), CNPq (MuZOO Project), FAPESP-PRONEX (eScience project), INCT in Web Science, and individual grants from CNPq.

## Background

Identification Keys are artifacts created by biologists to identify observed specimen

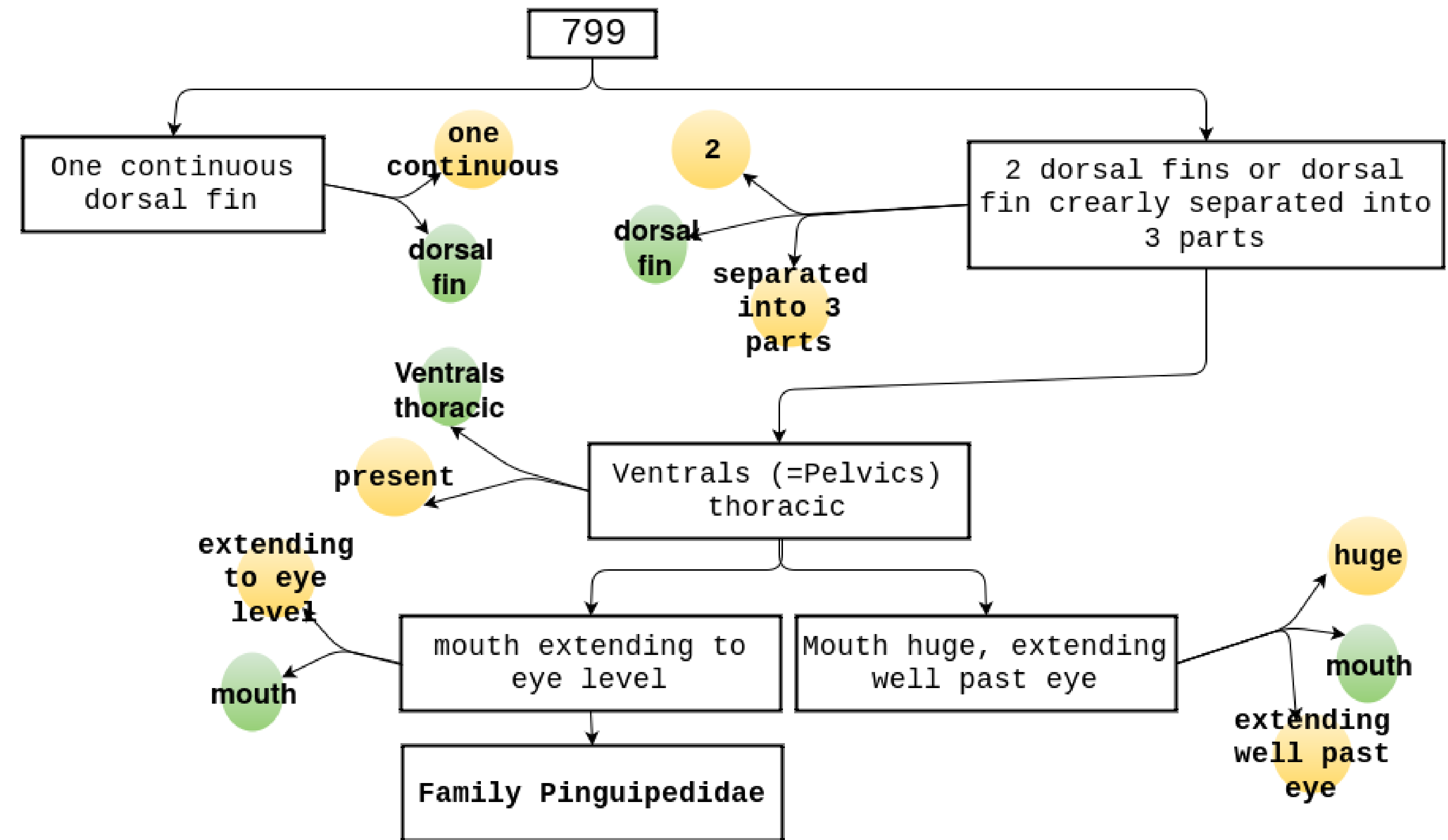
Couplet	Character	Next Prev	Link
1 a	One continuous dorsal fin.	2 (1)	
1 b	2 dorsal fins or dorsal fins clearly separated into 3 parts.	4 (1)	
2 a	Spines present in dorsals, sometimes feeble, pelvics present.	3 (1)	
2 b	No spines in dorsal or anal fin; eel-like; pelvics absent.	- (1)	Apodocreeidia, Creediidae
3 a	Mouth extending beyond eye, with elongate maxilla; caudal fin rounded to subtruncate.	- (2)	Opistognathus, Opistognathidae
3 b	Mouth reaching eye, lower jaw projecting; caudal fin pointed; first 2-3 dorsal rays filamentous, free.	- (2)	Trichonotidae

### Problems:

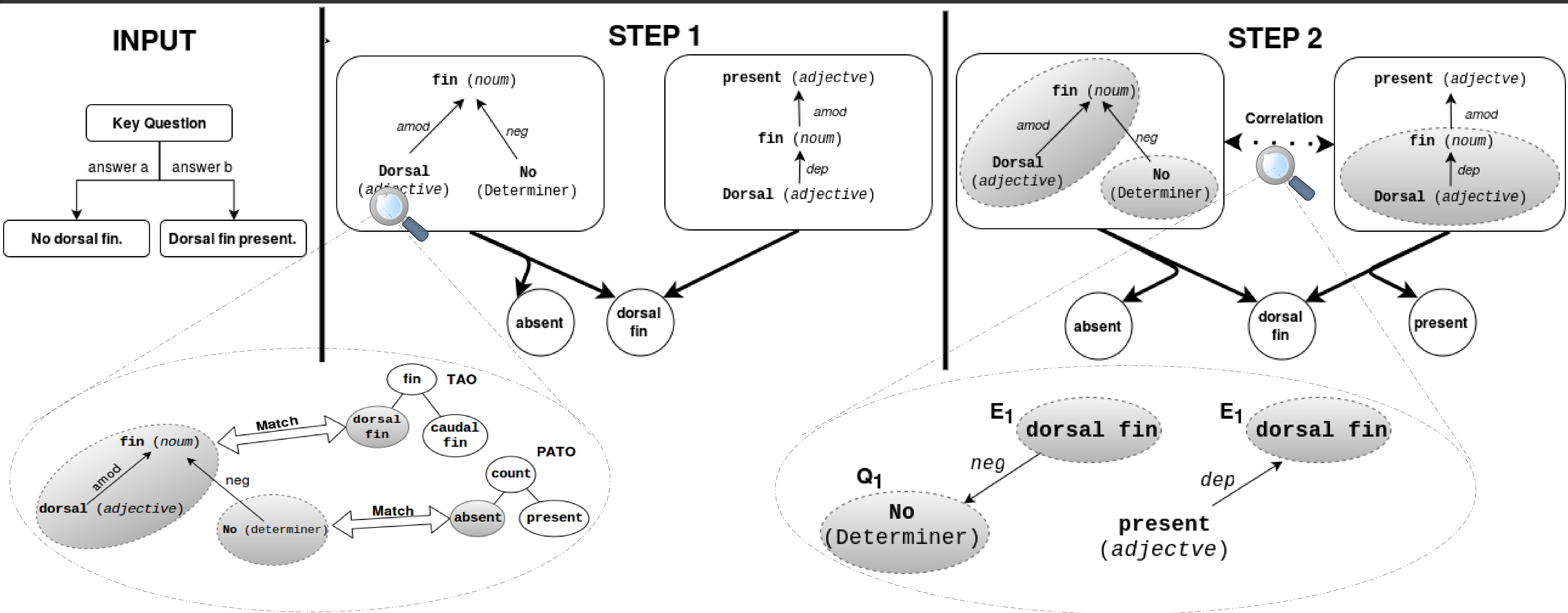
- Free-text
- Need of previous knowledge
- Reuse of Entities
- Relation between taxon and keys

## Goal

To identify and to explicit the phenotype elements locked in the Identification Keys.



## Proposed Approach Overview

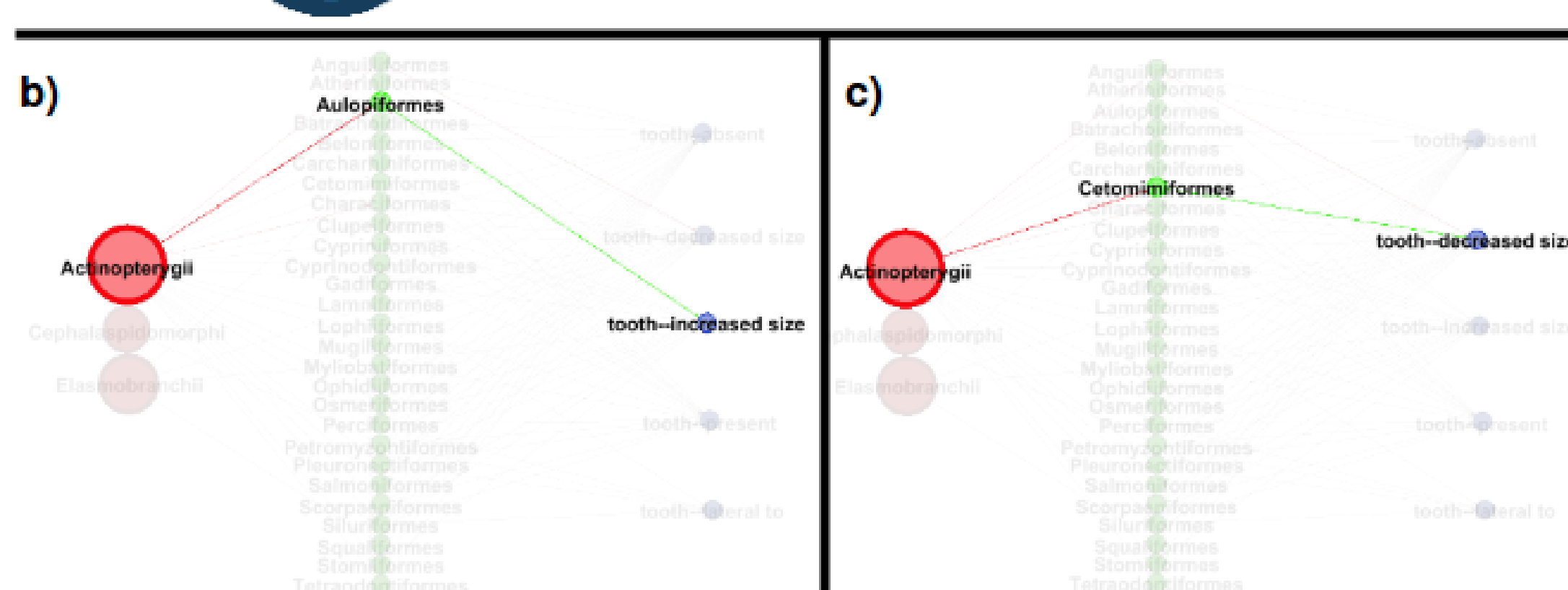
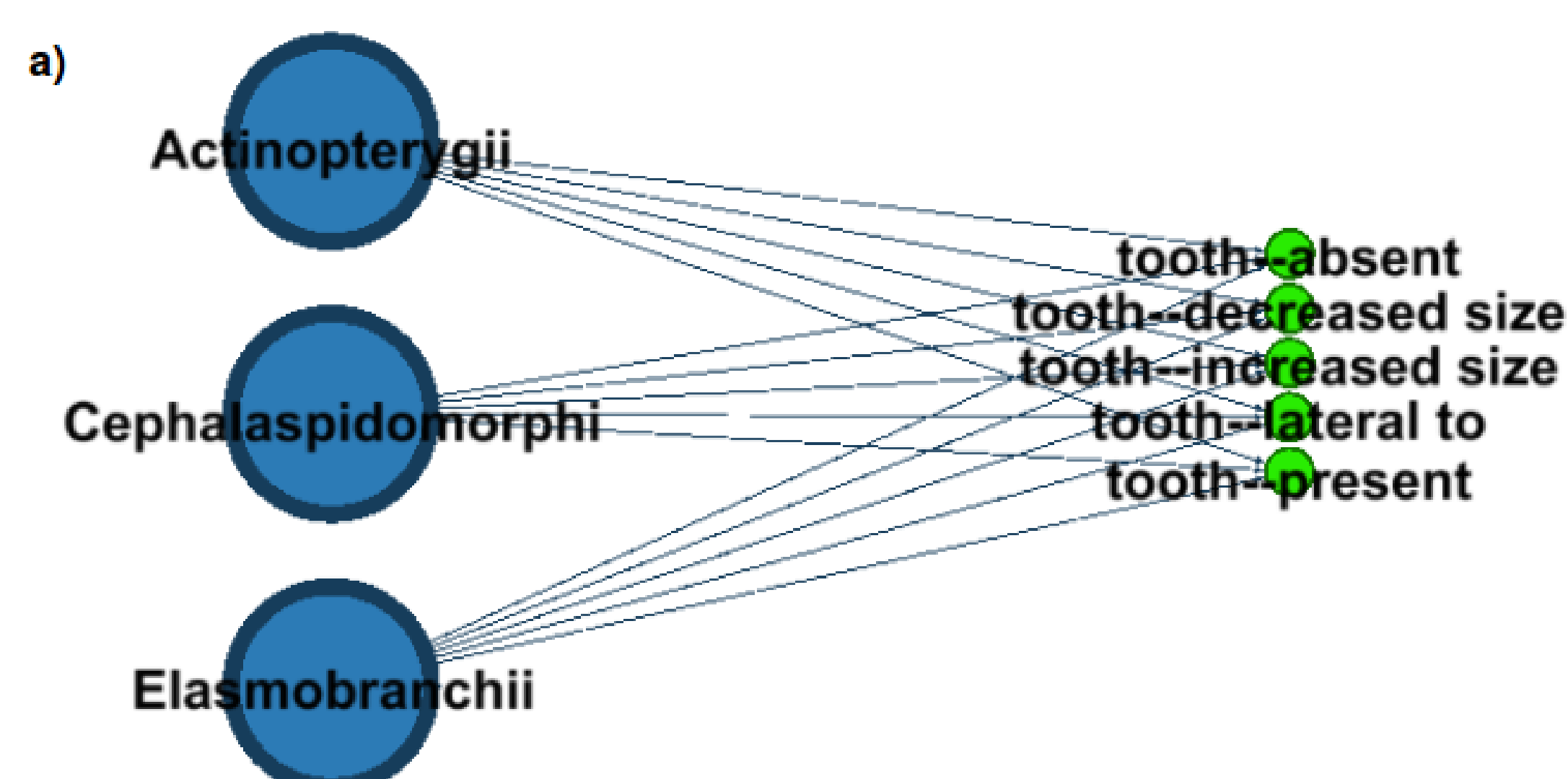


## Results

### Gold-Standard Based Assessment

Measures	Elements	EQ pair	Entity
Total Recall		0,45	0,76
Total Precision		0,87	0,94
Total F-measure		0,59	0,84

### Phenotypes Distinguishing Taxa



### Taxa Sharing Phenotypes

