

# The formation and motivation of onomatopoeic ornithonyms as a result of ecological and communicative interactions of man and birds

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## Abstract

Recent research allows referring to onomatopoeic ornithonyms as a linguistic product of interaction of bird and man's acoustic communicative systems. Within the assumed attitude the process of an onomatopoeic word formation is presented, types of onomatopoeic ornithonyms are classified and the results of etymological reconstruction of the onomatopoeic bases in the structure of Russian, English and French scientific names of passerine birds are described.

It is established that onomatopoeic ornithonyms in different languages are similar but not identical due to a number of factors, including man's weak imitative ability, subjective sound perception, existence of dialectal variants of bird voices, reflection of different elements of a bird vocalization, various language standards. The study of the imitative bases of scientific bird nominations shows that both phonetically and semantically motivated ornithonyms prevail over purely phonetically motivated ones. As for ornithonyms with lost motivation they demonstrate high quantity in the languages of the investigation.

**Key words:** acoustic communicative system, etymological reconstruction, genus name, lost motivation, onomatopoeic ornithonym, phonetic motivation, species name.

## Introduction

Onomatopoeic words represent one of the most investigated components in the system of sound iconicity but the problems of their origin and functioning are still of great interest, in particular when it comes to onomatopoeic ornithonyms. The foundation of ecological biolinguistics in the 80s of the XX century made it possible to study acoustic communication based on ecological interactions among members of biocenosis including imitative relationship between representatives of different species. Nowadays onomatopoeia is considered to be that

common feature which characterizes both bird and man's acoustic communicative systems.

Onomatopoeic ornithonyms that sound in a similar way in different languages were first revealed and defined as *biolinguistic parallelisms* by G.P. Dementiev and V.D. Il'ichev (1963). Such parallelisms demonstrate homogeneous and heterogeneous similarity (Silaeva *et al.*, 1999) the distinction of which hasn't been shown by the scientists yet.

According to the scientific data the greatest number of biolinguistic parallelisms is found for such onomatopoeic ornithonyms as Cuckoo (*Cuculus canorus*), Crow (*Corvus cornix*), Eagle-Owl (*Bubo bubo*), Siskin (*Spinus spinus*), Hoopoe (*Upupa epops*), Turtle Dove (*Streptopelia turtur*), Garganey (*Anas querquedula*) and Teal (*Anas crecca*) (Silaeva *et al.*, 1999). Typological similarity of onomatopoeic words shows that the link between the form of the word and its meaning is not lost and the most productive models of acoustic communication can be singled out in bird voices.

The article is aimed at summarizing the data that allow qualifying onomatopoeic ornithonyms as a linguistic product of interaction of bird and man's communicative systems. Besides the article reflects the types of onomatopoeic ornithonyms and the results of etymological reconstruction of the onomatopoeic bases in the structure of Russian, English and French ornithonyms that give vocal names to the representatives of the order Passeriformes. The detailed analysis of the problem was given in the scientific work «Acoustic communication in birds: the linguistic aspect» (Kurashkina, 2011).

## Materials and Methods

The empirical part is based on the analysis of scientific nominations and vocalizations of 103 species of the order Passeriformes taken from specialized Russian, English and French literature. Here belong the most trustworthy bird field guides (Bruun *et al.*, 1988; Snow, Perrins, 1998; Peterson *et al.*, 2004; Rjabitsev, 2008) and etymological dictionaries (Bu-

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lakhovsky, 1948; Skeat, 1956; Dauzat *et al.*, 1964; Chernykh, 1994; Vasmer, 2004).

## Results and Discussion

Traditional ornithonyms (including onomatopoeic ones) confirm the existence of important long-time contacts of man and particular bird species. The main factor bringing imitation to life and leading to reflection of imitated voices in a language might be hunting. According to the data of French bioacoustics, the attractive meaning of bird voices was well known to Egyptians in times long before Christ (BC). In the 50s of XX century there were discovered wall frescoes of Egyptian tombs depicting hunting scenes where acoustic means were identified (Il'ichev *et al.*, 1983).

The process of an onomatopoeic word formation represents a chain of complex transformations: 1) sound perception, 2) perception of a bird image and its voice, 3) storage and reconstruction of a bird image with its peculiar voice in memory (Silaeva *et al.*, 1999). Thus, one can demonstrate the process of lexical imitation development in the following way: bird voice → imitation of the bird voice → vocative-lexical imitation such as *oop-oop-oop* or *pinc* → onomatopoeic ornithonym (*hoopoe* or *pinson*). Presumably the given process started during the formation of human language when man's vocal tract was well adapted to the reproduction of natural sounds, and his ears were sensitive enough to perceive the most relevant sound components of bird voices.

Another fact in favour of the use of imitation of natural sounds for the sake of formation of man's acoustic behaviour consists in the similarity of folk music and bird voices. This phenomenon was investigated with the help of an original method called *sound microscopy* by Hungarian ornithologist and musicologist P. Szöke (1963).

It is believed that by late paleolith (when animal taming began) imitation had turned into onomatopoeic vocatives such as *tsip-tsip* or *uti-uti*. Tamed birds were getting used to man's voice and there was no need for man to copy their natural sounds. With the development and perfection of articulated speech man gradually loses his ability to copy natural sounds, while communication with wild birds is provided with the help of various hunter's whistles (Il'ichev, Silaeva, 1990).

As it is shown all the stages of the formation of imitations are based on man's practical activity beginning with the first imitative reproduction of a

bird's voice up to the final variant of an onomatopoeic ornithonym adapted to the standards and rules of a certain language.

Lexical units based on bird vocalizations can be found in all world languages and constitute the most diverse part of their vocabulary. One can distinguish between *scientific* and *dialectal* ornithonyms. Many scientific ornithonyms are of folk origin, while dialectal ones are considered to be quite rare nowadays. For some bird species there is no priority ornithonym which gives rise to several scientific ornithonyms-synonyms in one language, e.g. *tarier des prés* or *traquet tarier*.

Onomatopoeic ornithonyms are mainly derived from birds' common contact calls, their songs or parts of their songs, e.g. part of a cuckoo's song is *cuc-coo*. These vocalizations are frequently repeated and due to that are highly noticeable.

According to their vocal characteristics, onomatopoeic ornithonyms can be divided into phonetic onomatopoeic ornithonyms and lexical onomatopoeic ornithonyms. *Phonetic onomatopoeic ornithonyms* are the result of rendering of a bird voice with the help of phonetic language means, e.g. *chough*, *chiffchaff* (eng.), *lulu*, *traquet* (fr.). *Lexical onomatopoeic ornithonyms* characterize bird voices descriptively with the help of the semantics of onomatopoeic roots which makes the accuracy of imitation relatively lower, e.g. *to warble* → *warbler* (eng.), *babiller* → *babillarde*, *jaser* → *jaseur* (fr.). The main types of onomatopoeic ornithonyms are illustrated in table 1.

Etymological reconstruction made it clear that 48 Russian, 44 English and 31 French ornithonyms out of 103 scientific nominations of species of passerine birds have onomatopoeic origin either of their genera or species names.

Onomatopoeic basis expressed by the phonetic transcription of a bird's voice is preserved in Russian names of 9 bird species, English names of 5 bird species and French names of 4 bird species. 4 bird species nominations out of the given quantity demonstrate their phonetic motivation in the two languages of the investigation. Here belongs 1 species of the family Alaudidae: *юла* (*Alouette lulu*) ← *юли-юли-юли-юли* (*lullulullu*); 1 species of the family Sylviidae: *печочка-теньковка* (*Common Chiffchaff*) ← *тень-тень-тюнь* (*chiff, chiff, chaff, chiff, chaff*); 1 species of the family Turdidae: *черноголовый чекан* (*Traquet pre*) ← *чек-чек* (*ouis tra tra*); and 1 species of the family Fringillidae: *Chaffinch* (*Pinson des arbres*) ← *fink* (*pink*). Ornithonyms that give names

Table 1. Types of onomatopoeic ornithonyms based on birds of the order Passeriformes.

Russian	Phonetic onomatopoeic ornithonyms	
	English	French
Юла ( <i>Lullula arborea</i> ) ← юли-юли-юли		Alouette lulu ( <i>Lullula arborea</i> ) ← lullullulu
	Chough ( <i>Pyrhocorax pyrrhocorax</i> ) ← chough	
Грач ( <i>Corvus frugilegus</i> ) ← гра / кра		
	Carrion ( <i>Corvus corone corone</i> ) / hooded crow ( <i>Corvus cornix</i> ) ← krra krra krra	
Пеночка-теньковка ( <i>Phylloscopus collybita</i> ) ← тень-тень-тень	Chiffchaff ( <i>Phylloscopus collybita</i> ) ← chiff chaff chiff	
Чекан (2 species: <i>Saxicola rubetra</i> , <i>Saxicola torquata</i> ) ← чек-чек		Traquet pâtre ( <i>Saxicola torquata</i> ) / motteux ( <i>Oenanthe oenanthe</i> ) ← oui tra tra
	Chaffinch ( <i>Fringilla coelebs</i> ) ← fink	Pinson des arbres ( <i>Fringilla coelebs</i> ) ← pink
Юрок ( <i>Fringilla montifringilla</i> ) ← юррр		
Чиж ( <i>Spinus (Carduelis) spinus</i> ) ← чижи		
Обыкновенная чечетка ( <i>Acanthis (Carduelis) flammea</i> ) ← че-че-чет		
Обыкновенная чечевица ( <i>Carpodacus erythrinus</i> ) ← чече-вица / чечевицу видел		
Russian	Lexical onomatopoeic ornithonyms	
	English	French
Свиристель ( <i>Bombycilla garrulus</i> ) ← свирещать	Pipit (5 species) ← pipire / pipire	Pipit (5 species) ← pipire / pipire Jaseur boréal ( <i>Bombycilla garrulus</i> ) ← jaser
Лесная завирушка ( <i>Prunella modularis</i> ) ← завирать(ся)		
Сверчок (3 species) ← сверчать (voice resembles stridulation)	Warbler (14 species) ← warble	Locustelle (3 species) ← (voice resembles stridulation)
Зеленая пересмешка ( <i>Hippolais icterina</i> ) ← пересмеивать		
Северная бормотушка ( <i>Hippolais caligata</i> ) ← бормотать		
Славка-мельничек ( <i>Sylvia curruca</i> ) ← клекотанье, resembles the sound of mill-wheel at work		Fauvette babillarde ( <i>Sylvia curruca</i> ) ← babiller
Пеночка-трещотка ( <i>Phylloscopus sibilatrix</i> ) ← the song ends in an accelerated trill – «трещотка»		Pouillot siffleur ( <i>Phylloscopus sibilatrix</i> ) ← siffler
		Grive mauvis ( <i>Turdus iliacus</i> ) ← певчий (a songbird)
Певчий дрозд ( <i>Turdus philomelos</i> ) ← a melodious song	Song thrush ( <i>Turdus philomelos</i> ) ← a melodious song	Grive musicienne ( <i>Turdus philomelos</i> ) ← a melodious song
Обыкновенная пищуха ( <i>Certhia familiaris</i> ) ← пищать		Linotte mélodieuse ( <i>Acanthis (Carduelis) cannabina</i> ) ← melodious

to 10 bird species demonstrate phonetic motivation only in one of the languages of the research.

Onomatopoeic basis expressed by the semantics of onomatopoeic roots is preserved in Russian names of 4 bird species, English names of 19 bird species and French names of 7 bird species. Within the given quantity the following ornithonyms reveal phonetic-semantic motivation in the two languages of the investigation: 5 species of the family Motacillidae: *Richard's Pipit (Pipit de Richard)*, *Tawny Pipit (Pipit rousseline)*, *Tree Pipit (Pipit des arbres)*, *Meadow Pipit (Pipit farlouse)*, *Water Pipit (Pipit spioncelle)* ← *pīpīre / pīpīre*, 1 species of the family Bombycillidae: *свирустель (Jaseur boreal)* ← *свирущать (jaser)* and 1 species of the family Sylviidae: *печочка-трещотка (Pouillot siffleur)* ← the song ends in an accelerated trill – «трещотка» *sip-sip-sip-sip-sip-sip-sirrr*. Ornithonyms giving names to 16 bird species demonstrate phonetic-semantic motivation only in one of the languages of the research.

Bird voice quality assessment is observed in Russian names of 7 bird species, English names of 2 bird species and French names of 8 bird species. Within

the given quantity 2 bird species get their scientific names in accordance with voice quality assessment in all the three languages of the investigation. Here belongs 1 species of the family Sylviidae: *обыкновенный сверчок (Grasshopper Warbler, Locustelle tachetée)* ← rhythmic sounds resembling stridulation; 1 species of the family Turdidae: *певчий дрозд (Song Thrush, Grive musicienne)* ← have a melodious song. 3 species of the family Sylviidae boast of voice quality assessment in the names of the two languages of the research: *соловьиный сверчок (Locustelle lusciniöide)*, *речной сверчок (Locustelle fluviatile)* ← voice resembles stridulation; *славкамельничек (Fauvette babillarde)* ← *клеточанье*, resembles the sound of mill-wheel at work (*болтливая, щебетунья*). Ornithonyms that name 6 bird species demonstrate voice quality assessment in one of the languages under study.

On the whole English ornithonyms with the preserved phonetic and phonetic-semantic motivation (25 species nominations) prevail over Russian (20 species nominations) and French (19 species nominations) ornithonyms.

**Table 2. Onomatopoeic ornithonyms with preserved motivation distributed in accordance with the families of the order Passeriformes.**

Family	The total number of the analyzed species	Species demonstrating onomatopoeic origin of their genera and species names			Species with preserved phonetic motivation of their genera and species names			Species with preserved phonetic-semantic motivation of their genera and species names		
		R	E	F	R	E	F	R	E	F
Hirundinidae	3	-	-	-	-	-	-	-	-	-
Alaudidae	5	5	-	1	1	-	1	-	-	-
Motacillidae	8	-	5	5	-	-	-	-	5	5
Laniidae	2	1	2	-	-	-	-	-	-	-
Oriolidae	1	1	-	-	-	-	-	-	-	-
Sturnidae	1	1	-	-	-	-	-	-	-	-
Corvidae	9	6	7	7	1	3	-	-	-	1
Bombycillidae	1	1	-	1	-	-	-	1	-	1
Cinclidae	1	-	-	-	-	-	-	-	-	-
Troglodytidae	1	-	-	-	-	-	-	-	-	-
Prunellidae	1	1	-	-	-	-	-	1	-	-
Sylviidae	18	14	15	5	1	1	-	7	14	5
Regulidae	1	-	-	-	-	-	-	-	-	-
Muscicapidae	3	-	-	-	-	-	-	-	-	-
Turdidae	16	10	8	7	2	-	2	1	1	2
Paradoxornithidae	1	1	-	-	-	-	-	-	-	-
Aegithalidae	1	-	-	-	-	-	-	-	-	-
Paridae	7	1	-	-	-	-	-	-	-	-
Sittidae	1	-	-	-	-	-	-	-	-	-
Certhiidae	1	1	-	-	-	-	-	1	-	-
Passeridae	2	-	-	-	-	-	-	-	-	-
Fringillidae	13	5	7	5	4	1	1	-	-	1
Emberizidae	6	-	-	-	-	-	-	-	-	-
Total: 23 families	103	48	44	31	9	5	4	11	20	15

Note: R – the Russian language, E – the English language, F – the French language

It should be noticed that the variety of genera names are peculiar to Russian ornithonyms which increases their informative value. Cf. 14 out of 18 bird species of the family Sylviidae have an identical English genus name – *Warbler* – which only points to a general singing ability but gives no information about specific features of birds' vocalizations. Russian and French genera names of this family can boast of certain distinctions including indication of bird voice unique quality (*славка, пеночка, камышевка, сверчок, пересмешка, бормотушка: Locustelle, Phragmite, Rousserolle, Hypolaïs, Fauvette, Pouillot*).

As for the French language, it has a tendency to indicate bird voice characteristics in the form of a species epithet while the genus name is preserved for many species of the same family, e.g. 6 out of 7 thrush species are called *Grive* in French and their vocal abilities are concretized with the help of such adjectives as *mauves, musicienne, draine*. A number of ornithonyms are borrowed from other languages, for example some English nominations are borrowed from Latin onomatopoeic roots via French, e.g. 5 species of the family Motacillidae have identical English and French genera names – *Pipit* < *pīpīre / pīpāre* (latin).

Many modern scientific ornithonyms which are marked as onomatopoeic in etymological dictionaries can be characterized as ornithonyms with lost phonetic motivation. The quantity of such symbolic ornithonyms is quite great in the languages of the investigation and makes up 58% of the total number of nominations of onomatopoeic origin in the Russian language, 43% in English and 39% in French respectively. All the figures related to species that retain phonetic motivation of their names are shown in table 2.

## Conclusions

1. The unity of sensory, communicative, ecological and social relationships developed during man's practical activity makes it possible to regard the origin of onomatopoeic ornithonyms as both an ecological and communicative product. Biolinguistic parallelisms go together with variability in the formation of onomatopoeic ornithonyms of one and the same bird in different languages. This can be caused by a) man's subjective sound perception, b) dialectal variants of bird voices, c) reflection of different elements of a bird vocalization related to bird's various emotional states.

2. One of the reasons of similarity (but not identity!) of onomatopoeic ornithonyms in different

languages is man's weak imitative ability. Another reason can be that of the difference of language standards. Moreover, when Indo-European languages were closely connected ornithonyms used to have more common features but lost many of them in the course of their independent development.

3. Onomatopoeic ornithonyms can be of two types: phonetic and lexical ones. Each type is formed on the imitative basis with the help of appropriate language means. According to the etymological analysis data, the number of Russian, English and French both phonetically and semantically motivated ornithonyms prevails over purely phonetically motivated ones. This observation proves that bird vocalizations reflected in a language are of approximate and simplified character in comparison with the original bird voice qualities. The so-called symbolic ornithonyms, i.e. ornithonyms with lost motivation, prove to be most difficult in the reconstruction of their onomatopoeic bases while their quantity in the three languages of the research is rather high. To solve the problem one can not entirely rely on etymological dictionaries but get specialized literature alongside with biological and ecological sources involved in the analysis.

Thus, onomatopoeic ornithonyms do not only reflect man's adaptive abilities but show his vivid interest in particular bird species. On the whole the investigation of common features revealed in birds and man's communicative systems allows making man's acoustic behaviour more comprehensive and evaluating such a complex phenomenon as human language.

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