JIHOČESKÁ UNIVERZITA V ČESKÝCH BUDĚJOVICÍCH

FILOZOFICKÁ FAKULTA

ÚSTAV ANGLISTIKY

BAKALÁŘSKÁ PRÁCE

THE MOTIVATION FOR THE USE OF METAPHOR IN BIRD NAMES

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Ročník: 3.

2020

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Acknowledgement

Anotace

Tato bakalářská práce si klade za cíl probádat možné důvody, které motivují mluvčí k užití metafory v pojmenováních přírodních organismů. Práce se zabývá různými přístupy k pojmu metafory, především pojmem image metaphor definovaným Lakoffem (1992). Následuje popis onomasiologie a onomasiologických slovotvorných modelů aplikovaných při analýze. Pro účely práce byl vytvořen korpus metaforických pojmenování ptáků, která byla roztříděna podle typů salientních rysů, na něž metafory odkazují. Následná analýza probíhá v rámci těchto kategorií. Při vyhodnocování motivace pro užití metafory v pojmenování vycházím z klasifikace navržené v Kos (2019), kterou doplňuji nově vypozorovanými tendencemi. Výsledná data kvantifikuji a interpretuji.

Klíčová slova: metafora, onomasiologie, slovotvorba, pojmenování, jména ptáků, motivace užití metafory

This thesis aims to explore the possible reasons that motivate speakers to use metaphors in the naming units of natural organisms. The work deals with various approaches to the concept of metaphor, especially the concept of image metaphors defined by Lakoff (1992). This is followed by the description of onomasiology and onomasiological word formation models applied in the analysis. For the work, a corpus of metaphorical bird names was created. The names were sorted by the types of salient features that the metaphors express. The subsequent analysis takes place within these categories. In evaluating the motivation for the use of metaphor in the naming units, I adopted the classification suggested in Kos (2019), which I supplement with the newly observed trends. The resulting data are quantified and interpreted.

Key words: metaphor, onomasiology, word formation, naming units, bird names, motivation for the use of metaphor

Contents

1. Introduction

Metaphor is an interesting language phenomenon. It has been examined thoroughly many times by many a linguist. For a long time, metaphor was understood as a mere creative, decorative element, which belongs mostly to the works of literature, especially poetry, and without which the everyday language can do without any problems. This standpoint has been overcome, and the place of metaphorical expressions in common language has been justified, for example, by Lakoff's theory of conceptual metaphor. However, although the current studies concerning metaphor investigate how the metaphor works within the language, less attention is paid to the questions concerning the motivations for using metaphors in naming units.

Therefore, the aim of this thesis is to unveil the possible reasons why speakers create naming units containing metaphors. The linguistic material for this research will be the names of natural organisms, namely birds. The work will adapt the onomasiological approach, whose starting point for the analysis is a concept. This allows me to gather more names of one bird, some of which may reflect the same salient feature of the organism.

I will create the corpus of the bird names that contain metaphor. If possible, those will be compared with the names of the same birds in which the same salient feature is expressed literally. The evaluation of the motivation for using the metaphor in the naming units will be based on the classification from Kos (2019), or on the possible trends observed.

I will start with the description of the issue of metaphor, especially the type of metaphor defined by Lakoff (1992) as an image metaphor. Then I will focus on the definition of onomasiology and different approaches to this topic, and I will describe how metaphor can be interpreted from the onomasiological point of view. This part will be followed by the analysis, within which I will provide several examples of the bird names from each class, and I will quantify and interpret the resulting data.

2. Metaphor

Traditionally, metaphor was perceived almost solely as an aesthetic element in poetry and other fiction. Most people presume that the occurrence of metaphor in everyday language is sporadic and that it is only used as an expressive adornment (Lakoff, Johnson 1980: 15). According to George Lakoff, metaphor in the traditional sense could be defined as "a novel or poetic linguistic expression where one or more words for a concept are used outside of its normal conventional meaning to express a *similar* concept" (Lakoff 1992). However, during the last few decades, this concept has been challenged by new theories and approaches, which understand metaphor as an integral part of the language, if not the very key element.

The following chapters will describe some of the approaches to the phenomenon of metaphor, focusing on those that are pertinent to the subject of this thesis, that is, to the approaches applicable to metaphors occurring in the names of nature organisms.

2.1 Conceptual metaphor

The theory of conceptual metaphor is George Lakoff's paramount addition to the modern understanding of metaphor. It originates in the conviction that "the locus of metaphor is not in language at all, but in the way we conceptualize one mental domain in terms of another" (Lakoff 1992). This new approach suggests that in order to understand abstract and incomprehensible concepts such as life, death, or time, we compare those to more approachable notions such as journey, departure, or money. Lakoff calls these comparisons mappings, and he describes them as "sets of conceptual correspondences" (Ibid.). It means that what gets mapped is our knowledge about one domain onto the knowledge about the other. One of the most common examples is the mapping expressed by the proposition LOVE IS A JOURNEY. It is not one notion that is mapped onto the other, there can be many correspondences. In this instance, the lovers correspond to travellers, their goals in the relationship are the target destination, the hardships in their relationship are the hardships on the journey, etc. Since our language reflects our mental processes, the mapping "leaks" into the language and gives rise to countless expressions that clearly show that we understand the domain of love in terms of the domain of journey (Ibid.). Some examples of these expressions are:

Our relationship has hit a dead-end street

We're at a crossroads

Our relationship is off the track.

The marriage is on the rocks.

We can't turn back now.

We may have to go our separate ways. (Ibid.)

Although this theory manages to explain the origin of many metaphorical expressions, it appears that it is not directly applicable to the process of creating metaphorical names, which are consciously given to natural organisms such as birds. Nevertheless, it is still befitting to present the theory briefly since it can be beneficial in defining other concepts and approaches more relevant for the process of naming.

2.2 Image metaphor

Image metaphor is the approach that will be taken to metaphor in this thesis. It is another Lakoff's term that describes another category of metaphor. In some aspects, it is similar to conceptual metaphor: the structure of one domain is mapped onto the structure of another. The domain here is represented by a conventional mental image. (Lakoff 1987: 219) In Lakoff's sense, it is a visual imprint in our minds automatically acquired during our lives that enables us to summon a mental picture of anything generally known by our culture. What the image metaphor also has in common with conceptual metaphor is that the nature of it remains conceptual since it is the mental images where the origin of the metaphor lays, not the words (Lakoff 1992). As an example, Lakoff quotes Andre Breton: *My wife . . . whose waist is an hourglass*. In this image metaphor (or as Lakoff also calls it, one-shot mapping), one conventional image, specifically the woman's waist, is compared to another mental image – an hourglass. The concept which serves as the source of the mapping (an hourglass, in this case) is

called a source domain by Lakoff, and the entity it is referred to (here, a woman's waist) is called a target domain.

Then there are a few aspects in which image metaphor and conceptual metaphor differ. Lakoff sums them up in the following six points:

1. *One-shot mappings, as their name implies, are not used over and over again; that is, they are not conventionalized.*
2. *They are not used in everyday reasoning.*
3. *There is no system of words and idiomatic expressions in the language whose meaning is based on them.*
4. *They map image structure instead of propositional structure.*
5. *They are not used to understand the abstract in terms of the concrete.*
6. *They do not have a basis in experience and commonplace knowledge that determines what gets mapped onto what* (Lakoff 1987: 221).

These aspects also fit the characteristics of the metaphorical names of birds, as it will be shown.

The first point implies that image metaphors are only used once or extremely sporadically, which can be said about the bird names too. Although some metaphors reappear among the bird names, it does not seem to be because they would be conventionalized. For example, it is common for natural organisms to use the same genus name if they belong to the same genus.

The second point is certainly true about metaphorical names. Since the bird names are established and generally known (or, like in the case of local names, at least known to a certain number of people) they can be used repeatedly in everyday language. However, this is true about all names, and the possible metaphor in them serves as no tool in everyday reasoning. This is connected to the third Lakoff's point: a name is one stable unit which usually does not develop into any further language expressions.

The fourth point states that it is an image structure what is mapped in image metaphors. This too can be stated about the metaphorical names of birds. For example, colour, shape or pattern are often the features from the source domain that are mapped onto the target domain, as it will be shown throughout this thesis.

Although the use of metaphor in names has its justification and is beneficial from the name creation point of view, the metaphor is not used to help understand the

abstract in terms of the concrete, which makes the fifth point valid for bird names too. When creating a new name for any organism, the target domain is the organism itself, so it is always concrete.

Finally, the last point also appears to be valid for metaphorical bird names. Metaphorical bird names do not seem to come to existence as the result of any general conceptual metaphors like, for example, "*BIRDS ARE PEOPLE*", which would determine what gets mapped onto what, and cause the tendency for birds to be named after, say, professions or roles.

What Lakoff also points out is that the image metaphor expressions do not comprise the information about the specific part of the source domain that is being mapped onto the target domain, or whether it is the whole object or entity (Lakoff 1992). It also does not state what quality of it is the object of the mapping. Yet we usually easily comprehend both the part of the source domain relevant for the metaphorical expression and the relevant quality. To explain this and other issues, Lakoff presents the hypothesis called *The Invariance Principle*. The theory suggests that "metaphorical mappings preserve the cognitive topology (that is, the image-schema structure) of the source domain, in a way consistent with the inherent structure of the target domain" (Ibid.). It means that the target and source domain image-schema structures need to correspond in order to be able to create a metaphorical linkage. This constraint drastically limits the number of source domains that can be mapped onto one target domain, and it explains why some mappings are more likely to exist than others.

The Invariance Principle should also enable us to make sense of metaphorical expressions that we hear for the first time, such as the *My wife . . . whose waist is an hourglass* metaphor. After we summon the simple mental image of a woman's waist and of an hourglass, the Invariance Principle helps us determine what gets mapped onto what. The quality of the hourglass that is relevant for the metaphor is indeed the shape of the middle part of the glass portion of an hourglass. It is the only image-schema structure applicable to the inherent structure of a woman's waist. We would not imagine a woman with a waist that is see-through, fragile, or full of fine sand, but we can easily imagine a very small woman's waist.

As an example from the realm of birds, let us use *shoveler*. In this case, the target domain is the duck with the scientific name *Anas clypeata*, and the source domain is a shovel, specifically the lower wide metal part. The name *shoveler* maps the shovel

onto the duck's bill because there is a resemblance in shapes. Similarly to the hourglass metaphor, the name *shoveler* does not specify whether it is the whole shovel or just some of its parts that is being mapped onto the bird. Moreover, what is also unexpressed is the quality that is being mapped. In this case, it is the shape, but it could be a colour, material, texture, or other attribute. It is also unspecified what part of the bird is in focus, or whether it is the whole bird.

The hourglass metaphor is easily comprehensible since the target domain is very specific and the source domain has probably only one feature that could be applied to a woman's waist. When it comes to the *shoveler*, we would probably figure out what part of the shovel is the source of the mapping. The shovel only consists of two clearly distinguishable parts, the stick and the metal part. The stick is not nearly as salient, since it is a part of many other tools, its shape is shared with dozens other objects, and it has no specific colour. Therefore, it would unlikely become the source of the metaphor, so we are left with the metal part. The shape seems to be the only feature that is exclusive for the shovel since there are endless other objects that are made from metal, and there is also no specific colour of shovels.

According to the Invariance Principle, the image-schema structure of the shovel has to be consistent with the inherent structure of the bird. However, without seeing the bird, we cannot tell with certainty what structure it is. Theoretically, it could be the duck's wings, legs, head, or the whole bird's body shaped like a shovel, or there could be a shovel-like pattern on it. As soon as we are acquainted with the appearance of the bird, we can see the motivation for the metaphor.

2.3 Resemblance metaphor

According to Lakoff, image metaphor uses the mental image that is static and visual. This conception is updated by Grady by introducing the notion of resemblance metaphor, which also includes behaviour-based metaphors. The hypothesis suggests that an expression may be called resemblance metaphor if we perceive a common aspect in the source and target domains (Grady 1997: 222). The innovation lays in the fact that such an aspect does not need be only visual (meaning, for example, shape or colour), but it can also be of a behavioural character (Grady 1997: 222, 223) (knowledge about behavioural characteristics is indeed mostly acquired by the means of vision, too, but behaviour is not a part of the physical appearance of an entity that is referred to). To

illustrate this concept, Grady uses the metaphor *Achilles is a lion*. The common aspect that gave rise to the metaphor is a courageous behaviour. What Grady highlights is that what matters is only our perception of the common aspect, meaning that there does not need to be any objective and real similarity (Ibid. 222). This is well illustrated in the example mentioned since bravery is exclusively human attribute that is only projected on lion's instinctive behaviour (Ibid. 222, 223).

Ureña and Faber also adopted the term resemblance metaphor. They argue that the image metaphors and the behaviour-based metaphors should not be perceived as two different categories since they both stand on mental images with the only difference being the level of dynamicity of those images (Ureña, Faber 2010: 124). An example of a dynamic metaphor from the realm of birds could be *butcher bird* (*Lanius excubitor*), which got the name from its habit to impale its prey on thorns. The metaphor is based on the bird's actions, not on its appearance.

Ureña and Faber also updated the sense of the mental image. Their conception of metaphor still stands on the principle of two mental images being compared, but their character does not need to be visual (Ibid. 127). This thesis will adapt the extension; therefore, metaphorical names based on mental images formed by auditory, tactile, olfactory, and gustatory stimuli will be understood as image/resemblance metaphor too (although it appears that not all these motivations will find their representation in the realm of birds).

Two types of behaviour-based metaphor can be distinguished depending on whether the nature of the image of the source domain is dynamic or static (Ibid. 127-129). The dynamic images in behaviour-based metaphor are much more frequent because "behaviour and function mostly involve (loco)motion on account of a correlation or cause-effect event" (Ibid. 128). The above-mentioned *butcher bird* can serve as an example of this category. The metaphor emerges from the dynamic image of a butcher's meat processing. This action is mapped onto the image of the bird's unusual habit to impale its prey, such as mice, insects, or little birds, on thorns of bushes, which, for a bird, is an unusually systematic food handling.

Although it is less common, the behaviour-based metaphor may spring from the static image too. As an example, let us use *death bird*, the folk name for owls. This metaphor indicates the bird's night activity, and it originates from the negative evaluation and symbolism of night: night is dark, night hides unknown dangers, night is

death. Death is the static abstract source domain that maps onto the target domain, an owl, in respect of the bird's night activity (and perhaps a negative evaluation too).

Sometimes it is difficult to decide whether a metaphor falls under the image metaphor or behaviour-based metaphor (Ureña and Faber 132). An instance of this is the bird called *scribbling schoolmaster* (*Miliaria calandra*). The feature that gave rise to this metaphor is the bird's eggs covered in scribble-like pattern. The metaphor arises from the static picture of an egg, but it is not a part of the appearance of the bird (there is a metonymical connection PRODUCER FOR PRODUCT). The bird does not actively create the pattern, it is already there when the egg is laid. On the one hand, we have the source domain suggesting dynamicity, but on the other hand, there is the static image of the pattern. However, the process of creating it is missing, or more precisely, it is of a different nature and therefore irrelevant for the metaphor origin.

3. Onomasiology

The bird names in this thesis will be understood as linguistic expressions for the concepts reflecting the perception of birds that speakers get in touch with. This approach to lexicology is based on onomasiology.

The term onomasiology comes from the Greek ὄνομᾰ (onomā), meaning *name*. It is a branch of linguistics (specifically lexicology) which looks for the word forms of a concept. The concept, which can be represented by an object, attribute, activity, organism etc., is the starting point in this approach. The very opposite approach is taken by semasiology, whose concern is looking for meanings of a word form. A word form is the starting point here.

There are different onomasiological word formation models, and although they do share some basic principles, such as the prime role of extra-linguistic reality, they can differ in various aspects. Two of the major theories will be introduced: Dokulil's and Štekauer's theories.

3.1. Dokulil

Dokulil, who is regarded as the father of the onomasiological approach (Fernández-Domínguez 2019: 3), formed his onomasiological model in the context of Czech language. As he says, the specific realisations of the naming processes do vary across languages (Dokulil 1962: 29), but the principles of the model are language independent and can be applied universally.

The process of word formation starts with the concept to be named. However, it is never the concept itself what receives the name, it is only its imprint in our mind, our comprehension of it. Structuring of this content in our minds that creates the basis of the future name is called onomasiological structure. It consists of two constituents: onomasiological base and onomasiological mark (Ibid.).

On the level of the onomasiological base, the object of naming is classified into a conceptual class (Ibid.). For, example when a nature organism is to receive a name, such basic category can be fish, living being, or the most general conceptual class, substance.

The other constituent, the onomasiological mark, further specifies the expression of the conceptual class, and distinguishes it from the other members from the class. While the onomasiological base can only be simple, the onomasiological mark can be

both simple and complex. A primary quality such as colour can function as a simple onomasiological mark (e.g. *blackbird*). Actions can also be used as simple mark in Dokulil's model (e.g. *diver, skimmer*). The complex mark consists of the determined and determining constituents. This type occurs when an action requires further specification. In such case, the action itself is the determined constituent, and the specification (such as time, place, or result) is the determining constituent. An instance of the use of the complex mark is *matchmaker* (someone who "makes matches"). *Singer* or *dancer*, on the other hand, feature only simple mark. Beside actions, the complex onomasiological mark figures in expressing relations to the substance, too (Dokulil 1962: 30). An instance of it could be *chemist* – a person trained in chemistry (the determined constituent is unexpressed).

As implied above, not all the onomasiological constituents need to find their explicit realisation in the name. For example, in *novelist*, the determined constituent is unexpressed. Although we know it means someone who writes novels, we could theoretically understand it as someone who, for example, reads them.

According to Dokulil, there are three basic onomasiological categories: relational, transpositional, and modificational.

Relational onomasiological category (also called mutational category) is based on the relation between the onomasiological base and mark. Here, the base is specified by the mark represented by one of the four possible cognitive categories. Those are substance, quality, action, and circumstance (Ibid. 32). It is this onomasiological category which the bird names in this work are part of.

In case of transpositional onomasiological category, the lexical meaning of a unit is preserved, but its part of speech changes. Such process occurs, for example, when quality is objectified (*high – height*).

The last basic onomasiological category, modificational, does not require the creation of a new notional structure of a name. Here, a modificational mark is added to the base of the already existing notion. This happens, for example, in diminutives (*bird – birdie*).

Up to this point, the process of word formation is only the matter of structuring the content of the mind. To give the content a specific linguistic expression, a derivational basis has to be selected. The derivational basis is the part of the onomasiological mark that finds its realisation in the actual name (Kos, Kozubíková-Šandová 2020). The base is then classified into the word formative type, which is "the

result of abstraction of the specific and, in terms of word formation, homogeneous words with a specific lexical meaning" (Dokulil 1962: 70, my translation). This means that such series of words already existing in the concrete language provide the structural pattern for the newly created words sharing the semantics of this series. For example, what can be abstracted from the word series is a suffix, which can then find its way to the new word. A new word, however, does not come into existence until it is grammatically formed, represents a specific part of speech, and becomes the part of a certain paradigm (Ibid. 54).

3.2 Štekauer

Although Štekauer states Dokulil as one of the main sources for his onomasiological model, their theories are largely self-contained (Kos, Kozubíková-Šandová 2020).

Štekauer presents several levels on which the word formation takes place. Again, the process of naming begins with the need to name extralinguistic reality. On the conceptual level, the object of naming is conceptually analysed and defined by means of the so-called logical predicates (noems), and sorted into conceptual categories (substance, action, quality, and concomitant circumstance) (Štekauer 2001: 26). On the semantic level, the logical predicates are expressed by semes. The onomasiological level is where one of the semes acquires the function of the onomasiological base, and one is selected to function as the onomasiological mark, which can be formed of the determining constituent and the determined constituent (Ibid.). This forms an onomasiological structure based on the one of Dokulil. The onomatological level is where the structure finally receives a linguistic material. This happens via the Form-to-Meaning-Assignment Principle, which assigns the semes previously selected in the onomasiological structure to derivational basis or affixes (Ibid.).

The chosen morpheme has to consist of already existing linguistic material included in Lexicon, but there are several possibilities to express each seme in the onomasiological structure. For instance, an agent can be expressed by the lexeme *man*, or by the suffixes like *-er*, *-ist*, or *-ant*. The final choice is limited by "word-formation rules, affix subcategorization, specific constraints, sociolinguistic factors, etc." (Ibid.). But what according to Štekauer also plays the role is the creative aspect of the speaker (Ibid.) along with aspects like current fashion trends, or individual preferences determined by gender, age, education, or language environment (Kos, Kozubíková-

Šandová 2020). Štekauer's model also distinguishes between the types of word formation in terms of number of constituents of the onomasiological structure linguistically expressed in the final form of the word.

3.3 Metaphor in the context of the onomasiological models

Given the topic of this thesis, it is needful to find the place of metaphor in Dokulil's and Štekauer's onomasiological models.

Dokulil is not concerned with metaphor in his work, and he does not address it in context of word formation. He only talks about metaphor once in the context of semantic shift, which he perceives as broadening of the meaning of an already existing word, that is, using the existing name for a new concept on the basis of metaphorical or metonymical link between the original object of the name and the new object (Dokulil 1962: 20). However, Dokulil does not perceive this process as word formation as such, since the word form remains unaltered, so no new word comes to existence.

To find the place of metaphor in the word formation model where new word forms are created, we can have a look at the example *hadice* (hose, lit. snake + suffix), which was provided by Dokulil to illustrate the complex onomasiological mark (Dokulil 1962: 30) (the fact that this name can be understood as metaphor was not commented on by the author, so it is not clear whether he understood it as such or not). Dokulil describes the onomasiological structure of *hadice* as "a thing resembling a snake", which means that the metaphor is already part of the structure. In this thesis, however, the onomasiological structure of hadice is understood rather as "specifically shaped thing", which means that the metaphor is not present in the structure yet. Metaphor is perceived as one of the possible means of expressing the onomasiological structure. Consequently, when it comes to the Štekauer's model, the possible metaphor would not appear at the onomasiological level, but at the onomatological level, where the semes find their linguistic form.

3.4 The conceptual structure of the word

For better examination of the bird names in this thesis, I will adopt the conceptual structure of the words from Kos (2019).

At the perceptual level of the Štekauer's onomasiological model, the global and local features of the entity to be named are found. The global feature classifies the entity into the mental category such as bird, fish, or plant. The local feature is what distinguishes the entity from the prototypical representative of the cognitive category that the entity belongs to. It is the salient feature of the entity and it can be either static (such as colour, shape, or pattern) or dynamic (such as an activity, place or time of occurrence, or relations to other entities).

The conceptual structure of the word with static salient feature looks like this:

ASPECT / PART (QUALITY) FOR THE WHOLE

(…) The salient feature refers to one of the possible aspects of the referent – ASPECT FOR THE WHOLE, e.g. shape, colour, size, and at the same time this aspect refers to a part only or the referent as a whole, – PART FOR THE WHOLE. The third part of this structure is the quality itself, e.g. what shape, what colour, or what size. (Kos 2019: 149).

The last part, THE WHOLE, is the onomasiological base. Not all the constituents, however, will have to find their linguistic expression. For example, the name *white-winged lark* covers QUALITY, PART, and BASE, *white swan* consists of QUALITY and BASE, and *redcap* refers to QUALITY and PART.

When it comes down to the structure of the names with a dynamic feature, it is composed of the determining and determined constituents, and the onomasiological base. "The determining constituent is an entity in a metonymical relation to the referent, and the determined constituent expresses the type of the relation or merely an activity" (Ibid.)

Again, not all the constituents need to be expressed. For example, in case of *moor-fowl*, only the determining constituent and the BASE are expressed. On the contrary, in case of *dive-pigeon*, only the determined constituent along with the BASE are present.

4. Analysis of the bird names

This part of the thesis will focus on the analysis and classification of the bird names from my corpus. It will include the description of the process of creating the corpus with the characterisation of the names that were excluded from the corpus. Then I will specify the system of categorisation of the names. Several examples will be presented to illustrate the diversity that metaphor can achieve. The results will be quantified and commented on.

4.1 The corpus

The source for my corpus was the book *A Thesaurus of Bird names* by Michel Desfayes (1998). In the book, there are 445 species of birds, each of which is listed under its scientific name and accompanied by the common names and local names from various languages. I went through all the English names, and I selected those that seemed to include metaphorical expression.

The next step was to verify the presence of metaphor, and to connect it with its specific motivation. Many of the names in the *Thesaurus* were commented on by the author, and the motivation for the metaphor was explained. The pictures of the birds whose names were not explained were found on www.birdsoftheworld.org (using the scientific name) and compared to the names. This process explained majority of the cases of metaphors that refer to a static feature of the bird. For example, the alleged metaphor in the name *blood hawk* (Falco tinnunculus) did not prove to refer to any static salient feature of the bird (the bird was expected to be at least partly red, which was disproved).

In case the metaphor appeared to be motivated by the bird's vocalisation or movements, a video had to be found (also available at www.birdsoftheworld.org). Then, some basic information was found about the birds whose names remained unexplained. The birds' food, natural habitat, time of occurrence, or any kind of unusual behaviour were useful pieces of information. This extralinguistic research was useful, for example, in case of *lady dishwash* (*Motacilla alba*), whose salient feature is its common occurrence around the water.

The names that remained unclear after this process were sorted out of the corpus. These and other dismissed categories will be discussed in the following chapter.

If two or more birds have the same name, it can appear in the corpus more than once. The same name can also reappear in case it consists of more independent metaphors. Different spelling variations of one name are not included. In case one bird has more different names with the same metaphor (such as *colley*, *colley-bird*, *colley-thrush*), all the options are incorporated.

The final corpus consists of 724 naming units. Depending on type of salient feature(s) reflected by the metaphor, the names were sorted into a few categories. The salient features referred to by the metaphor that arose from the analysis are *colour*, *shape*, *sound*, *pattern*, *size*, and *dynamic salient feature*. These types of features, along with the category of more salient features depicted by one metaphor, established the categories within which the names will be examined in the following parts of the thesis.

4.1.1 Dismissed naming units

In this part, I will present the categories that were not included in the corpus.

4.1.1.1 Non-transparent names

Non-transparency of the metaphors was the most common reason why some of the names did not get into the corpus. Here are the names containing the alleged metaphor whose source domain did not appear to be metaphorically connected to the bird in any way, or the connection was not sufficiently substantiated. Such names were, for example, *bastard* (*Anas strepera*), *tom-pudding* (*Tachybaptus ruficollis*), *welsh ambassador* (*Cuculus canorus*), *whip tree* (*Apus apus*), or *wagoner* (*Larus marinus*).

The reasons why the connection could not have been found are various. For example, the name could have originally belonged to a different bird, but later might have been given to another one. Another possibility is that the seeming metaphor was a result of a spelling variation, which changed the original word into a different one with a different meaning (this option appears most likely in the cases of shorter names). Also, the meaning of the words in the unclear name could have been different at the time of the coining. The unclear name could also be a case of calque, and the original meaning of the metaphor might have got lost in translation.

4.1.1.2 Border-line instances

Even if it is clear what feature the potential metaphor refers to, it was not always clear whether the expression is metaphorical or literal. For this ambiguity, names from this category did not make it into the corpus.

For example, the bird *faller* (*Circus cyaneus*) is so named because of its hunting technique: when it catches sight of a possible prey, it flies almost perpendicularly to the ground to catch it. It is hard to decide whether such action is still a flight or whether the bird is truly falling. Even if it was considered metaphor, it still cannot be perceived as a typical instance, when a mental picture of one domain is mapped onto a completely different one.

Another example is *arsfoot* (*Tachybaptus ruficollis*), a duck whose legs look like growing from its behind. In fact, they are not, but again, not an unambiguous instance.

Sharp-tailed duck (*Clangula hyemalis*) has very long and thin tail feathers. They are definitely not sharp in the sense of the main definition from a dictionary: "having an edge or point that is able to cut or pierce something" (www.lexico.com). However, the word *sharp* is commonly used for describing objects that only *look* sharp, so the possible metaphor might be already ossified, and therefore not considered metaphor.

4.1.1.3 Metaphors from the realm of birds

Most of the naming units that included names of different birds, and therefore could be possibly considered metaphorical, were not included in the corpus.

An example of such name is *sea-lark*, the name for the dunlin (*Calidris alpina*). It is a part of *Scolopacidae* family, whereas the lark belongs to *Alaudiae*. It cannot be detected whether the dunlin received the name because the bird was in some way considered comparable to the lark, in which case the name would be the result of semantic shift, or whether the bird was simply *considered* lark, in which case the name would only be the result of the folk taxonomy, which is inconsistent with the scientific classification.

However, in case the reference to other birds was obviously metaphorical, the names were added to the corpus. For example, such is the case of *english-parrot* (*Picus viridis*), which, in fact, is a woodpecker. The possibility that the bird was considered a real parrot is highly implausible because parrots do not naturally occur on the British Isles.

4.2 Classification

As already mentioned, the bird names were sorted into several categories according to the salient feature depicted in the name. Those are *colour*, *shape*, *sound*, *pattern*, *size*, *texture*, *dynamic salient feature*, plus there is a category consisting of the names that merge more than one of the bird's salient features.

The next step was the core part of the thesis: looking for the motivation behind the use of a metaphorical name. Ideally, the metaphorical name would be compared to the same bird's literal name that expresses the same salient feature. Then it would be possible to identify the differences in the meaning or the morphological structure and see whether using one name is more beneficial than using the other. However, although some of the birds have as much as sixty names, it was rather rare to come across a bird that had both metaphorical and non-metaphorical names that would be expressing the same salient feature. Therefore, the approach taken in those cases was based on the reconstruction of the onomasiological structure of the name and attempting to express it in the potential literal names, which could then be compared with the real metaphorical names.

The research took place within each category separately since it was likely that the motivations for the use of metaphor in the names would vary across them. The names were sorted into groups according to the suggested reasons for the metaphor. The basic classification was based on Kos (2019). The names that did not fit in the categories described were put into new categories that had sprung from the tendencies observed.

4.2.1 Colour

Frequency: 147

Colour is a basic static feature that can be found on any physical object. It is usually a stable feature, manifest enough to be noticed immediately, which might be why it is one of the most common static features depicted by metaphor in this corpus. Metaphors in the names refer to the colour that was perceived as salient, that is, that differs from the "average" colours of birds. The names in this category may refer to the colour of the whole bird's body or a part only.

4.2.1.1 More accurate expression of the shade of colour

Frequency: 58

The birds' names in this category aim to describe the colour more accurately than would be possible using only literal language.

Compared to the potentially infinite number of colours, there is relatively low number of words literary expressing them in English. Metaphorical expressions, on the other hand, present much wider range of options to choose from in order to stay as true to the colour in question as possible. For example, *canary yellow*, *sulphur yellow*, *lemon yellow*, or *mustard yellow* are all metaphorical expressions for different shades of a colour that would be most likely simply called *yellow* if no metaphors were to be used. However, some might call some of the stated shades *brown* or even *orange*. It is beneficial to express colours metaphorically for this reason too. Using terms like *sulphur yellow* leaves significantly less space for interpretation than the plain literal term *yellow*.

At this point, it would be beneficial to distinguish certain dimensions that the concept of colour has. Those can be reduced to hue, lightness, and saturation (Steinval 2002: 11).

Hue is essentially the colour itself, it is the "basic colour family" (Ibid.). We refer to it, for example, as red, blue, yellow, or green.

The next dimension, lightness, specifies how dark or light colour is. For illustration, we can imagine a photo editor function in the form of a scale that can alter the lightness of a photo (although this function is usually called *brightness*). On one side of the scale, the photo becomes nearly white, on the other side, it becomes nearly black.

The last dimension, saturation, determines how strong, vibrant colour is. When thought of as of a function in a photo editor, this would make the photo black and white on the one end of the scale, and loud and vivid on the other.

A mixture of these dimensions of colour results in the final shade, which is what the names in this category refer to. For example, *copperfinch* (*Fringilla coelebs*) has a belly bearing the colour of copper. The literal expression for the colour, possibly *brown*, or *reddish brown*, would only depict the hue while metaphor also manages to express the lightness and saturation.

It should be noted, however, that the source domain's and target domain's colours do not always match perfectly, but the aim to draw nearer to the target domain's real colour is usually apparent. The reasons for the inaccuracy could be that the colour of the source domain is not always consistent. For example, the adjective *old* is sometimes used to express the grey colour of a bird, but there is no universal shade of grey that old people's hair has. If nothing more, the metaphor conveys that it is a lighter shade of grey, which cannot be expressed by one literal lexeme.

Some examples from this category are *old will* (*Strix aluco*), *old hen* (*Stercorarius parasiticus*), *dove hawk* (*Circus cyaneus*), *citril finch* (*Serinus citrinella*), *slate-backed throstle* (*Turdus pilaris*), or *firetail bob* (*Phoenicurus phoenicurus*).

Old will and *old hen* are names that use the same metaphor *old*, which expresses the greyish colour of the birds. The shades of the two birds are by no means matching, but they both are possible shades of grey hair characteristic for old people.

The name *dove hawk* expresses accurately the colour of a grey dove, *citril finch* is a bird whose plumage partly bears the colour of a lemon, and *slate-backed throstle's* back has the colour of slate.

The belly and tail of *firetail bob* have the yellowish colour with a gradual shift to brownish orange shades, resembling the colours of fire. The awkward literal description of the colour proves best that the metaphorical name is beneficial here. Moreover, the single word *fire* possibly represents more than one shade.

4.2.1.2. Blocking

Frequency: 43

This category is formed of the naming units that appear to use the metaphor because the literal names expressing the same salient feature are already blocked by other birds.

All the names in this category depict the salient feature of black or white colour. These two colours are rather commonly found on birds' plumage or other body parts. Black and white share certain features that are different from other colours, which allows us to put them into one group, even though some might say that they differ from each other as much as they possibly can.

According to some definitions, black and white do not count as true colours. More importantly, unlike other colours, they do not come in various shades (there are no dimensions of lightness and saturation). This is proved well enough by the fact that

even language defies expressions like *dark white* or *light black*, and *light white*, or *dark black*, while expressions like *dark blue* or *light blue* are perfectly normal (Wierzbicka 1996: 301). Still, it would be naïve to think that any colour called *white* is objectively perfectly white (and not, for example, slightly greyish), or any colour called *black* is perfectly black (and not a very dark shade of grey). Therefore, there appears to be a certain limited range of "shades of black or white" that we are unable to distinguish, especially when not seen next to the "real" black or white. Such nuances are negligible, especially for the purpose of this research[1].

The fact that there are no shades of black or white makes the theory of the more precise expression of colours not applicable here. Therefore, the theory that the metaphor is used to avoid using the blocked literal names is presented.

The names metaphorically expressing black or white colour are for instance *parson bird* (*Larus fuscus*), *devil bird* (*Apus apus*), *collier* (*Apus apus*), *mealy-bird* (*Clangula hyemalis*), or *snow goose* (*Anser caerulescens*). The metaphor in these names stands for the colour only, it is not specified what part of the bird is black, or whether it is the whole bird, and, as it was said, it cannot do a better job describing the shade. Therefore, the metaphor could be easily swapped for the literal word *black* without any change in meaning. Then, if the onomasiological base was expressed, for example, by the word *bird*, which is a common base among birds' names, there would simply be too many *blackbirds*. *Blackbird* would consequently have too many extralinguistic referents, and the principle to have different names for different realities would be violated.

The tendency to give different names to different entities is by no means exclusive to the black or white birds, it rather appears to be a general principle applied when giving names to any entity. There is also no way to prove the theory on specific examples, so it remains only an assumption. For these reasons, any other justification of the use of metaphor in the names will be considered superior.

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[1] Yet there appears to be a bird whose names (*velvet scoter, velvet-duck*) aim to express the abnormally "dark black" colour (these are described in the section 2.2.1.3 Extra dimension)

4.2.1.3 Nominalisation of adjectives

Frequency: 24

Thanks to metaphor, the base in the onomasiological structure may remain unexpressed (Kos 2019: 152). The reason for that is that the metaphorical expression does not need to have the form of an adjective (Ibid.). Names like *blackbird*, *black diver*, *blackie*, or *black tail* express the salient feature literary by the lexeme *black*. Since *black* (like all literal expressions of colours) is an adjective, another constituent of the onomasiological structure has to be expressed (the base or another constituent of the onomasiological structure of the mark). But the metaphorical expressions may have the form of a noun, which makes it suitable for standing alone. Therefore, there are names like *devil-swallow* or *parson bird* along with names like *devil* or *parson*.

Traditionally, names like *devil*, *parson*, or *pope* would be considered created by a semantic shift, when an already existing expression acquires a new meaning. It seems like the unmodified version of the word *devil* or *parson* was chosen to function as a bird name, and it only broadened the meaning of the word. Therefore, it appears that such names should not be discussed in the context of onomasiological word formation. Nevertheless, as suggested in Kos (2019), these naming units go through the same onomasiological process as their morphologically more complex equivalents (150). This conclusion is supported by the series of names such as following:

(1)   *a. devil swallow*
        b. devil bird
        c. devilling
        d. devil (Ibid.)

Example (1) features four different names all used for one bird, namely the swift (*Apus apus*), whose salient feature (the black colour) is expressed by the same metaphor in all the names. But while the first three names (1a-c) express both the onomasiological mark and the onomasiological base (in a., the base is *swallow*, in b., it is *bird*, and in c., it is the suffix *-ling*), the last name expresses the mark only. Therefore, the metaphorical names with the unmodified form can be perceived as the results of proper word formation and as the utmost examples of the economy of expression, where only one constituent of the structure is realized.

In this thesis, as such are understood even the names that are not morphologically simple, for example *miller*, *tinker*, *baker*. These names differ from, for example, *smoukie, baldie* or *devilling*, where the suffixes represent the onomasiological base. In case of names like *miller*, the metaphors use the source domains whose names already contained the suffix. The suffix was a part of the already existing words that did not change their forms when they became bird names.

Similarly, the names like *old man*, *cathedral-parson*, *fool's coat*, or *king-harry* also are not morphologically simple. The onomasiological base is still unexpressed, because all the morphemes in the names function as one unit that depicts one constituent of the onomasiological structure of the mark.

Some more examples from this category are *churchwarden*, *bishop (Gavia immer)*, *pope (Fratercula arctica)*, *miller, white baker* (*Sylvia communis*).

The names *churchwarden*, *bishop*, and *pope* use dark dressed people as the source domain. In case of *miller* and *white baker*, the source domains are workers who typically wear white, plus are likely to get covered in flour. The name white baker is interesting since the colour is expressed literally too.

What is interesting is that all the source domains in this section are people or humanoid creatures. Some of the metaphors also occur repeatedly in the names of different birds, such as *parson*, *miller*, or *devil*. Such rather common reference to significantly coloured people/humanoid creatures may present a slight hint of a system in the bird naming process. Then again, it might be caused only by the lack of suitable source domains.

This function of metaphor not to express the onomasiological base appears across all the following categories of bird names. It is a function that affects the morphological structure of the names, and it is independent on the other functions of metaphor.

4.2.1.4 Extra dimension

Frequency: 29
Among the colour expressing names, a group of names emerged that was slightly puzzling at first. It is formed of the names whose source domains' colours do roughly match the target domains' ones, but the motivation behind the names can be on no account justified by the effort to represent the shade more precisely.

Most of the cases in this category were birds with the colour on them that would be most likely called *yellow*. This feature, however, was referred to as *gold* or *golden*[2] in the names (for example, *golden oriole* (*Oriolus oriolus*), *golden wren* (*Regulus regulus*), *goldfinch* (*Emberiza citronella*)). Although the actual bird's colour by no means matches the tint, let alone the sheen of the precious metal, there was a trace of a system found. The birds with "gold" names were compared to those, whose names feature the literal word *yellow* (such as *yellow-wren* (*Phylloscopus trochilus*), *yellow poll* (*Anas penelope*), or *yellow owl* (*Tyto alba*)). What came out is that while the "gold" birds' actual colour is often rather glaring shade of yellow, the "yellow" birds' colour is usually somewhat muted shade of yellow, often on the border with brown.

From this fact, it is presumed that the speakers perceived some qualities of gold as applicable on some shades of yellow but not on the others. The key to this issue might lay in the dimensions of colour. While the metaphors in the category *More accurate expression of the shade of colour* seem to treat the shade as a mixture of all the dimensions, the metaphors here appear to highlight only one or two of the dimensions. In case of the metaphor *gold*, the highlighted dimension seems to be lightness. Although the hue of gold does not fit too well the hue of the birds, the metaphor focuses on the typical brightness of gold, especially when hit by the direct light. This is the characteristic quality of gold that might be mapped onto the brightness of the yellows of the birds, even for the cost of lower degree of correspondence between the other dimensions.

Another example from this category is *blood-olp* (*Pyrrhula pyrrhula*), with *blood* expressing the bird's red front. Standing next to, for example, *robin redbreast* (*Erithacus rubecula*), we can see that *redbreast's* colour compared to *blood-olp's* appears rather brown than red. Then again, the colour of *blood-olp* certainly does not match the colour of blood (does not match the hue perfectly), but the metaphor might attempt to express the unusually hight saturation of the bird's colour. The saturations of the colour of blood and of the bird's colour seem to be on the similar level.

Velvet scoter or *velvet-duck* (*Melanitta fusca*) are also interesting examples. In comparison with most other birds with black plumage, *velvet scoter* (despite that no shades of black exist) appears to be "blacker" than them. This is probably caused by the low sheen of its feathers. The bird is compared to velvet, the fabric with a thick short

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[2] Although *gold* and *golden* are probably already lexicalized expressions for colour, the expressions are considered metaphorical in the thesis

pile, which from most angles absorbs the light, giving it a very dark appearance. I see the metaphor as an attempt to highlight the minimal dimension of lightness. The metaphor probably cannot be considered the source of more accurate expression of the overall shade since velvet does not need to be black (although it is a typical colour for the material). The literal *black* would not capture the intensity of the actual colour.

It appears that the dimensions of colours could be expressed literally. For example, *golden wren* could be called *very bright/light yellow wren*. Such name, however, would be probably too uneconomical. Moreover, literal expression might not always be the option. *Velvet scote*r, for instance, could not be called *dark black scoter* since such expression sounds unnatural and tautological.

4.2.1.5 Extra dimension plus nominalisation of adjectives

Frequency: 6

In this category, there are the names with metaphors that express extra dimension of colour, but by nominalisation of the potential literal colour adjective, the metaphor allows the onomasiological base to remain unexpressed.

Fool's coat, *lady-with-the-ten-flounces*, *proud-tail*, *blossom-bird*,[3] and *king-harry* is a very interesting set of names, which all belong to the same bird (*Carduelis carduelis*). The bird's salient feature is its multicoloured plumage, which features bright red and yellow marks, along with black, white, and light brown areas. Not only is it a rather high number of colours for one bird, but the colours are very "extreme" in terms of lightness and saturation: black is on the one end of the scale of lightness, white is on the other, and the bird's red and yellow are both close the "saturated" end of saturation. Although none of the names denotes specific colours (hue), only variegation in general (ASPECT), they do denote the quality of lightness and saturation. *Blossom-bird* evokes the vivid, opaque colours since we associate typical flowers in blossom with such colours. *King-harry* also denotes bright colour since such were probably expected by the speakers to be worn by people in high positions. Similarly, *proud-tail* uses a brightly dressed person as the source domain. That *proud* means brightly and variously coloured is supported, for example, by the phrase *as proud as a peacock*, with peacock also being diversely and brightly coloured. The person dressed in highly contrasting, vivid, and

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[3] *Blossom-bird* has the base expressed and therefore belongs to the previous category. *Proud-tail*'s base is unexpressed, but it is thanks to metonymy, so it also part of the previous category.

mismatched colours might be also called fool, thus *fool's coat*. Lastly, metaphor in *lady-with-the-ten-flounces* also refers to higher number of colours. Again, the colours are expected to be bright and saturated since flounces are usually found on dresses or folk costumes, for which bright colours are typical.

4.2.1.6 More accurate expression of shade plus nominalisation of adjectives

Frequency: 5

There are also naming units that contain metaphors that combine the aim to express the shade more faithfully with the unexpressed base. Some examples of the names are *oldfellow* (*Acrocephalus scirpaceus*) (motivated by the grey colour of old person's hair), *pea* (Caprimulgus europaeus) (motivated by the colour of pea), *yellow-amber (Emberiza citronella)* (named after the colour of amber), *flying-toad* (*Caprimulgus europaeus*) (the bird has the unattractive colours of toad).

4.2.1.7 Summary of Colour

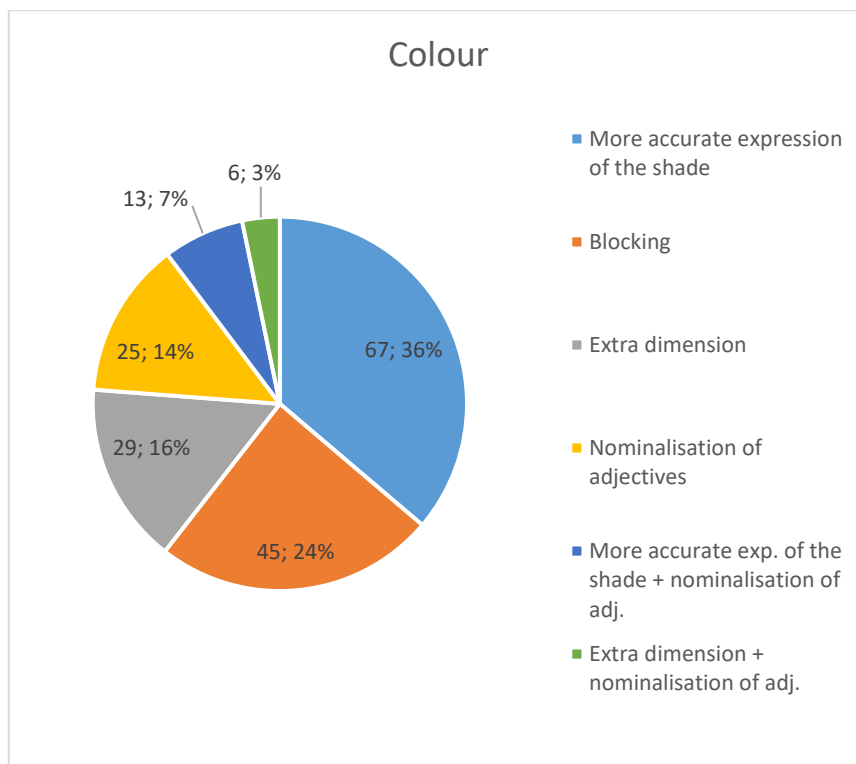| Colour	
More accurate expression of the shade	67
Blocking	45
Extra dimension	29
Nominalisation of adjectives	25
More accurate exp. of the shade + nominalisation of adjectives	13
Extra dimension + nominalisation of adjectives	6
Total	185

Table 1: Summary of Colour

Figure 1: Graphical summary of Colour

As apparent from the chart, over a third of the names (36%) are those that target on the accuracy of the expression of colour. This category consists of the names with metaphors referring to various colours excluding black and white. The onomasiological base is expressed (e.g. *old hen, slate-backed throstle, firetail bob*).

Around a quarter (24%) consists of the names that seem to use metaphor for avoiding the already blocked names. All the metaphors in this category refer to black or white colour, and the onomasiological base is expressed. Out of the 45 names, 27 use human/humanoid source domain (e.g. *parson bird*, *collier*, *mealy-bird, snow goose)*.

The names with extra dimension make 16% of the whole. Those are the names with metaphors that highlight a lightness or saturation of colour. The source domains and colours depicted are diverse (e.g. *golden oriole, blood-olp, velvet-duck*).

The names with the nominalised adjectives make 14% of the whole. They all contain metaphors with human/humanoid, and black or white source domain (e.g. *parson*, *devil*, *pope*).

The names with combination of accuracy of expression of the shade and the unexpressed base make a minor group (7%). There are no black or white source domains used in this category (e.g. *mule, pea, old man*).

Another minor part (3%) are the names combining the expression of extra dimension with the nominalised adjective, so the onomasilogical base did not have to be linguistically expressed (e.g. *fool's coat*, *lady-with-the-ten-flounces*, *king-harry*).

It surprising that the group called More accurate expression of the shade + nominalisation of adjectives is not bigger, considered that there are quite a few names with metaphor expressing black or white colour, and without the expressed base. All the source domains referring to the black or white colour in names with the unexpressed base are people (e.g. miller, baker, pope, churchwarden, parson) or humanoid creatures (devil) for whom black or white are typical colours. Therefore, it might be that it is more natural to name a bird after a human/humanoid creature and not to express the base (such as *parson* or *devil*) than it is to name it after other entities and retain the base unexpressed (such as *mule*, *pea,* or *yellow amber*).

Then, the reason why there are not more names with metaphor for a different colour (not black or white) and with the unexpressed bases might be that there are not suitable source domains, that is, people/creatures that typically wear colours like red, blue, or yellow. *Old man, granny gull,* and *oldfellow* are the only names that refer to a different colour (grey) that use a person as a source domain.

It also appears that people/humanoid creatures are the most common source domains for expressing the black and white colours. In total, there are 74 names of birds with the salient feature black or white, (regardless the category). Only 22 of them use non-person/humanoid creature source domain. There are only five source domains used in these names, namely coal and velvet for black (e.g. *coal tit*, *colley*, *velvet duck*), and snow, flour, and bareness for white (e.g. *snowy owl*, *mealy mouth*, *bare-faced crow*).

4.2.2 Shape

Frequency: 156

The shape is after colour another basic visual and static quality of any physical object. Metaphors in the birds' names in my corpus may refer to the shapes of any part of the bird's body (such as a beak or tail), to the birds' body as a whole, or to the shape of an object that is not part of the bird, but where a metonymical connection exists. In this research, shape is understood as both two-dimensional (silhouette), and three-dimensional. Patterns on the birds' bodies are not understood as shapes, they receive their own category.

Although the shape is usually understood as a static and stable quality, living organisms like birds can in a certain sense change their shape, especially if we understand it as a silhouette. Therefore, the birds' salient features may not be apparent in some situations.

4.2.2.1 Literal inexpressibility

Frequency: 91

It was presumed that the main reason why metaphor is chosen to express shapes in bird names would be the incapacity of the literal language to do the same. This presumption was based on Kos (2019: 155). Although there are literal words in English (such as *round*, *pointed*, *triangular*, or *square*) which do express shapes literally, the vocabulary is limited and the shapes that they are capable of describing are only very basic. There is also a large space for interpretation of the expressions like *round* or *pointed*, or, in other words, there is a wide range of actual shapes that could be described as *round* or *pointed*. Although more complex shapes could be theoretically also described literary, such description would be probably very lengthy and complicated, and thus certainly not usable for a naming unit.

Examples of the names from this category are *anchor-bird* (*Apus apus*), *shear-tail* (*Sterna hirundo*), *sawneb*, *sawyer* (*Mergus serrator*), or *letter-bird* (*Phalacrocorax carbo*). These are instances of the birds where the salient feature, the shape, is perceived as a silhouette.

Anchor-bird's silhouette on the sky resembles that of an anchor, *shear-tail's* tail has a shape of a slightly opened scissors, *sawneb* has many "teeth" on its beak, which resemble those of a saw, and *letter-bird's* spread wings resemble the shape of the letter *M*.

4.2.2.2 Literal inexpressibility plus unexpressed base

Frequency: 38

The unsuitability of the literal expression of shape proved to be the reason for using metaphor for all the names in this category, but as shown in the category of colour, metaphor allows the base to remain unexpressed, and therefore achieve formally simpler and more economical expression. In case of shape, the unexpressed base is not the result of nominalisation of the literal adjective for shapes since there are no such

adjectives. The metaphor, however, usually has the form of noun, which can stand on its own. For example, there is no *awl bird* or *knot bird*, but only *awl* and *knot*.

Examples of the names are *awl* (*Recurvirostra avosetta*), *parrot* (*Alca torda*), *knot* (*Calidris canutus*), *knob* (*Pyrrhula pyrrhula*), or *rose-muffin* (*Aegithalos caudatus*).

Awl's beak is long and very thin, resembling an awl, and *parrot* has a beak similar to the beak of a parrot.

Knot, *knob*, or *rose-muffin* are names containing metaphor motivated by the roundish shape of the birds. Here, it is the three-dimensional shape that is mapped onto the bird.

There are also names like *bank-bottle*, *bank-jug*, *ground-oven*, *ground-barrel* (*Phylloscopus collybitus*). They do not refer to the shape of the bird itself, but to the shape of its nest, so there is a metonymic link between the bird and its nest (PRODUCT FOR PRODUCER).

4.2.2.3 Literal inexpressibility plus simplification of the onomasiological structure of the mark

Frequency: 22

Another means of economy of expression that metaphor has is the capacity to fuse the constituents of the onomasiological structure together, which results into the formally less complex expression (Kos 2019: 153).

An example of such name is *booted eagle*. What the metaphor refers to is the bird's legs thickly covered in feathers, which gives the impression of the eagle wearing high boots. The constituents that got fused are PART and QUALITY. The QUALITY is the specific shape of boots, and since we know how boots are worn, we know that the PART is legs.

The constituents that got merged in this category are always PART and QUALITY. Some other instances of such names are *bonnettie* (*Podiceps cristatus*), *horned-owl*, and *eared-owl* (*Asio otus*).

Bonnettie is a name for the bird that can fluff its feathers around its head, giving it the appearance of a bonnet. Not only does the metaphor represent the shape (i.e. the QUALITY) rather accurately, but it also manages to cover the PART, since bonnets are usually found on the head. Moreover, the part of the head to which the metaphor refers

would be very difficult to refer to using literal language, because there is no meronym in English whose referent would be the very part of the head in question[4].

Horned-owl and eared-owl are two names for the same bird, both motivated by the conspicuous feathers on the owl's head. Again, QUALITY and PART are comprised.

4.2.2.4 Literal inexpressibility, unexpressed base, and simplification of the onomasiological structure of the mark

Frequency: 3

In three cases, the names combined both the instruments of the economy of expression. These are *ruff* (*Philomachus pugnax*), *stilt* (*Himantopus himantopus*), and *hornwig* (*Vanellus vanellus*).

During courtship, the males of the bird called *ruff* show off a rich feather collar around their neck, which is the motivation for the metaphor. Beside the QUALITY and PART compression, this naming unit's base remains unexpressed, resulting in a structurally condensed, yet morphologically simple name.

Similarly functions the name *stilt*. The bird received its name for its abnormally long and thin legs, which give the impression that the bird walks on stilts.

The name *hornwig*, in fact, consists of two metaphors both referring to the conspicuous feathers on its head, which may resemble both horns and a wig.

4.2.2.5 Summary of Shape

Shape	
Literal inexpressibility	95
Literal inexpressibility + unexpressed base	42
Literal inexpressibility + simplification of the onomasiological structure of the mark	21
Literal inexpressibility + unexpressed base + simplification of the onomasiological structure of the mark	3
Total	161

Table 2: Summary of Shape

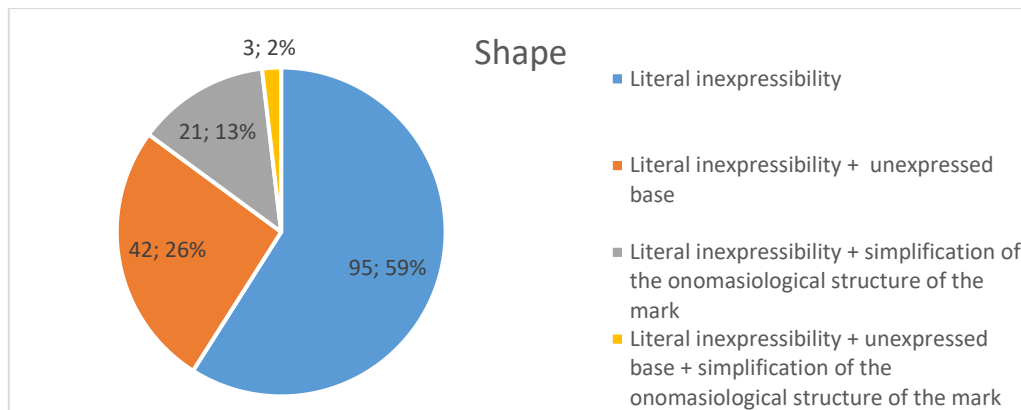[4] The role of meronymy will be described in more detail in the chapter Pattern

Figure 2: Graphical summary of Shape

All the names metaphorically express a salient feature that would be literally inexpressible.

For over a half of the bird names (59%) this is the only benefit that metaphors present (e.g. *anchor-bird*, *shear-tail*, *sawneb*).

About a quarter (26%) consists of names in which the literal inexpressibility is accompanied by the unexpressed base (e.g. *awl*, *knot*, *bank-bottle*).

The names in next group (14%) combine the inexpressibility with the condensation of the onomasiological structure of the mark. The condensed constituents were always PART and QUALITY (e.g. *bonnettie*, *horned-owl*, *eared-owl*).

The names in the last and smallest group (2%) have both unexpressed base and condensed onomasiological mark (PART + QUALITY) (*ruff, stilt, hornwig*).

The reason why the shape metaphors can combine the constituents PART and QUALITY seems to be the existence of suitable source domains, that is, specifically shaped object typically found on specific places on the body (e.g. horns are on the head, boots are on the feet, ruff is around the neck). Such condensation does not happen in colour metaphors because there are no source domains that would combine the quality of colour with the typical place of it on the body.

4.2.3 Sound

Frequency: 125

The birds' vocalisation (or otherwise produced sounds) may be another salient feature projecting into the birds' name. Since sound depends on time, it is, in fact, a dynamic

feature, so it uses the onomasiological structure of dynamic features. Therefore, the metaphors can also have the form of verb.

If we are to linguistically depict a sound, there are three options: "we can either *search for* similar characteristics of the perceived vocalization in the realm of the phonemic system of our language, which results in onomatopoeia (…), use a verb which generally characterizes the sound (usually lexicalized onomatopoeia), or find the characteristic features of the sound in other domains, which leads to a metaphoric expression" (Kos 2019, 156).

The naming units in this category were created using the last option. Among them are, however, also names containing verbs which are understood as literal expressions of a specific sound or the range of sounds. But in order to qualify as a metaphorical name, the verbs have to be tied exclusively to a certain sound produced by a certain object or creature (not bird, of course). Such verbs are, for instance, *bark* – to make the loud rough, cry of a dog; or *wail* – to audibly cry or sob in sorrow. The less specific verbs like *cry*, *scream*, *sing*, or *squeak* are not considered metaphorical in the birds' names.

4.2.3.1 Literal inexpressibility

Frequency: 44

As noted in Kos (2019), the quality of sound is not literary expressible, since even using the sound verbs, which we would like to call literal, leaves extremely large space for interpretation (157). Still, metaphor appears to aim to convey the actual sound more faithfully than the verbs implying sounds (Kos 2019, 157). This claim, however, is not easy to prove. It would include comparing the metaphorical name and the "literal" name with the actual bird's sound. Not only is it rather rare for one bird to have both types of the names, the different names could be triggered by different parts of the bird's vocalisation. Moreover, the results of such comparison would be probably very subjective.

Here are some examples that use verbs denoting sound, yet they are classified as metaphorical: *barker* (*Limosa limosa*), *purrin bird* (*Caprimulgus europaeus*), *laughing bird* (*Picus viridis*), *musical wailer* (*Numenius arquata*).

Barker makes short sharp sounds, which resemble the bark of the little dogs. *Purrin bird's* sound is a constant, low vibration, possibly resembling the purring of a cat

or an engine. Laughing bird received its name after its voice resembling laughter. *Musical wailer's* song, on the contrary, sounds like mournful sobbing. The word *musical* in its name might also be considered metaphor, referring to the tuneful nature of the cry.

Then there are the bird names that express the salient feature *sound* via a new domain not primarily denoting sound. The sound of the source domain is nominalized by the metonymy PRODUCER FOR PRODUCED, where producer is the entity that makes the sound, and produced is the sound. Examples of the bird names with such source domains are, for example, *cricket-bird*, *rattlesnake-bird* (*Locustella naevia*), *bell-bird*, *sawfinch* (*Parus major*).

Cricket-bird and *rattlesnake-bird* are the names of one bird, whose song consist of higher frequency clicking sounds. Both creatures from the source domain, the cricket and the rattlesnake, produce similar sounds. *Bell-bird* and *sawfinch* also refer to one bird, but while the name *bell-bird* aims to depict rather the quality of the bird's sound (possibly resembling the chiming of the bell), the name *sawfinch* implies the frequency and rhythm similar to the sound effects produced by the saw in use. These examples imply that like in the case of colour, the sound also seems to have different qualities that are distinguished by the speakers (e.g. the quality of the sound itself or frequency).

4.2.3.2 Literal inexpressibility plus unexpressed base

Frequency: 35

The category of names with sound metaphors also proved to be rich in naming units using the option not to express the onomasiological base, which, as it was described in previous chapters, is a possibility allowed by metaphor. This, however, only applies to the nominal metaphors. In case the metaphor is a verb, the base is required.

Examples of these names are *cry-baby* (*Emberiza citrinella*), *moor-drum* (*Botaurus stellaris*), *fiddler* (*Tringa hypoleucos*), *handsaw* (*Ardea cinereal*).

4.2.3.3 Summary of Sound

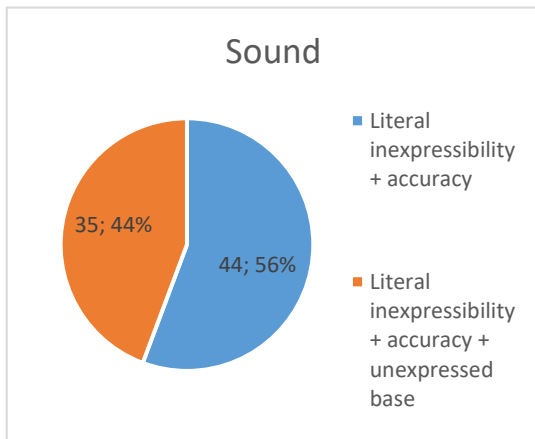| Sound	
Literal inexpressibility	44
Literal inexpressibility + unexpressed base	35
Total	79

Table 3: Summary of Sound

Figure 3: Graphical summary of Sound

Sound was found generally literally non-expressible. All the metaphorical names depicting the bird's vocalisation seem to attempt to express the sound more accurately than would be possible using the few "literal" lexemes denoting sound.

The category Literal inexpressibility + accuracy makes around a half of the names (56%). Those contain the metaphors of the sounds nominalised via the PRODUCER FOR PRODUCED metonymy (e.g. *cricket-bird*, *rattlesnake-bird*, *bell-bird*) or the metaphorically used verbs denoting sound (e.g. *barker*, *purrin bird*, *laughing bird*).

The other rough half of the names (44%) keeps the onomasiological base unexpressed. The metaphors in those only contain the nominalised sound expressions (e.g. *cry-baby*, *moor-drum*, *handsaw*).

4.2.4 Pattern

Frequency: 66

In my corpus, pattern is understood as any two-dimensional design on any part of the bird's body, usually formed by variously coloured plumage. The pattern may be repetitive.

Sometimes it was rather problematic to decide whether to perceive the bird's part in question as a shape or pattern. For example, *mitten* (*Circus cyaneus*) is named after the dark coloured tips of its wings, which creates the effect of the bird wearing mittens or gloves. Part of the border of the "mitten" is also the border of the wing (which would sort it into the category of shape), but part of it ends on the wing, bordering only with a different colour (which would fit my definition of pattern). Therefore, both the classification as *shape* and *pattern* could be justified. For the research purposes, *pattern* was chosen. After all, this classification is not essential for revealing the motivation of the metaphor.
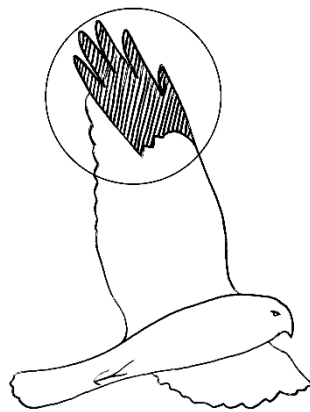

Figure 4: The pattern on *mitten* (*Circus cyaneus*) resembling a mitten or glove

This and similar examples are interesting from the point of view of meronymy. The expression *mitten* probably cannot be considered meronym. To classify as such, the part in question has to meet certain conditions, most importantly the "non-arbitrary boundaries and determinate function with respect to the whole" (Cruse 1986: 158, 159). In case of *mitten*, the boundaries of the pattern are indeed arbitrary, and the function of the part is no different from the rest of the wing. If the metaphor in *mitten* referred to, say, the whole wing (for example, because the whole wing would resemble the shape of a mitten), it would be the case of meronym.

Most of the metaphors in the names in this category refer to the part where the pattern is, but the pattern itself is not defined too much by the metaphor. For example, the metaphor in *spectacled-duck* specifies the pattern, it does resemble spectacles. The metaphor in cole-hood (Emberiza schoeniclus), on the other hand, only refers to the head area, but whether the pattern resembles the hood is questionable. However, these

two types of names were not sorted into different categories because the categorisation would be based only on highly subjective judgements.

4.2.4.1 Literal inexpressibility

Frequency: 13

The salient feature *pattern* defies the literal description in the same sense as *shape* since, in the context of this research, a pattern is essentially the shape or shapes on the bird's body.

Examples are *tortoise-shell goose* (*Anser albifrons*) or *owl-thrush* (*Turdus viscivorus*). *Tortoise-shell goose* has a pattern on its body, giving it the appearance of a tortoise shell, and *owl-thrush* has a speckled pattern on its belly, so typical for many owls.

4.2.4.2 Literal inexpressibility plus unexpressed base

Frequency: 11

Again, due to the nominal nature of the metaphor, the base remained unexpressed in some names.

Some examples of these are *moon* (*Regulus regulus*), *star* (Sturnus vulgaris), or *barnacle* (Branta bernicla).

Moon is a bird with moon-like pattern on its head and *star* is all spotted, which resembles night sky. When it comes to *barnacle*, it is called after a type barnacle, which is an arthropod creating shells attached to rocks by the sea. The shells create a pattern similar to the one on the goose. This resemblance also gave rise to a myth that the geese hatch from the shells of the marine organism.

4.2.4.3 Lack of suitable meronyms

Frequency: 41

In terms of classification, most of the names denoting pattern were rather problematic. Usually, the metaphor appears to specify the place on the bird's body where the pattern is, but the pattern itself is not specified much. There always is *some* pattern (that is, an area that differs in colour from its surrounding), but the extent to which it resembles the

source domain is rather limited. Therefore, I propose that from the onomasiological structure, such metaphors express PART and ASPECT (pattern in general), not PART and QUALITY (specific pattern). Metaphor thus attempts to solve the lack of meronyms of specific body parts.

Examples of these are *spectacled-duck* (*Bucephala clangula*), *black-eared wheater* (*Oenanthe hispanica*), or *whisker-bird* (*Miliaria calandra*).

Spectacled duck has two oval shapes below its eyes. The metaphor determines the area of the pattern. In similar fashion, *black-eared wheater* has a pattern on the place where ears usually occur, and *whisker-bird* has a pattern on the sides of its head.

4.2.4.4 Lack of suitable meronyms plus unexpressed base

Frequency: 31

Here are the names that combine the function from the previous category with the possibility not to express the onomasiological base.

Examples of these are *monk* (*Sylvia atricapilla*), *mitten* (*Circus cyaneus*), *ruff* (*Circus cyaneus*), or *coal-hood* (*Pyrrhula pyrrhula*).

The round shape on the top of *monk's* head looks like the bald spot on the heads of some Christian monks. This metaphor also fuses PART and ASPECT, but it also dispenses with the expression of the onomasiological base. Of course, using this metaphor makes the naming unit less transparent, since it is not apparent what quality of monk is mapped onto the bird, nor that the concept called *monk* is a bird.

The already mentioned *mitten,* which has a pattern on the tips of its wings, achieves the same goals, and so does *ruff,* which has a collar around its neck. The name *ruff* appeared in the category of shape too, where it referred to the bird whose "ruff" was three-dimensional.

Coal-hood has a black pattern on its head, which resembles a hood. It could be argued that such name is literally expressible, for example, by the bahuvrihi *black-head*, but like hoods, the pattern does not cover the whole head, so the literal expression would be at least less accurate.

4.2.4.5 Summary of Pattern

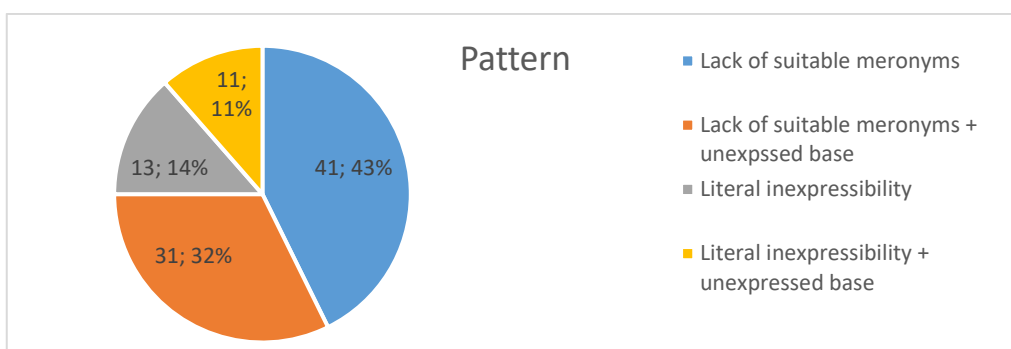| Pattern	
Lack of suitable meronyms	41
Lack of suitable meronyms + unexpressed base	31
Literal inexpressibility	13
Literal inexpressibility + unexpressed base	11
Total	96

Table 4: Summary of Pattern

Figure 5: Graphical summary of Pattern

Almost half of the names (43%) were those with the metaphors dealing with the lack of suitable meronyms. The names in this section refer to the place of the pattern rather than to the specific shape of it (*spectacled-duck*, *black-eared wheater*, *whisker-bird*).

31 names (32%) also refer to the place of the pattern only, but their onomasiological base is unexpressed (e.g. *monk*, *mitten*, *ruff*).

Metaphors in 13 names (14%) denote the pattern itself, but without the placement specification (e.g. *tortoise-shell goose*, *owl-thrush*).

The rest of the names (11%) are those that specify the pattern and achieve simpler form by not expressing the onomasiological base (e.g. *moon, star, barnacle*).

Not considering the expressed/unexpressed base, around three quarters of the names feature metaphor referring to the placement of the pattern rather than the actual quality. The reason for that might be that birds are often rather small animals, and they are often only seen flying by, so it is not always easy to focus on the details. Colour, for example, appears to be detectable more easily even from the longer distance, and therefore there are metaphors for the specific qualities of colour.

4.2.5 Size

Frequency: 43

The size can also function as a salient feature decisive in the process of naming. Unlike, for example, the case of the quality of colour, within which we are capable of distinguishing countless shades, the scale of sizes expressed by the examined names is greatly limited – the size becomes a salient feature only when the bird is exceptionally small or, in significantly fewer cases, exceptionally big (there were only three bird's names found that are based on the salient feature *big*).

4.2.5.1 Blocking

Frequency: 19

For the above described reason, it cannot be assumed that the metaphor does better job describing the size or that the size cannot be expressed literally. The suggested reason for the use of metaphor here is the tendency to keep diversity among names, so not all the birds with the salient feature *small* are called, for example, *small bird* or *little bird*.

Some examples of the names are *oxeye-creeper* (*Certhia familiaris*), *kitty-wren* (*Troglodytes troglodytes*), *dwarf auk* (*Alle alle*), *thumb-bird* (*Regulus regulus*). The names that depict the largeness are *griffon vulture*, *gryffon* (*Gyps fulvus*), and *harpaye* (*Circus aeruginosus*). They use large mythical creatures as the source domains.

4.2.5.2 Blocking plus nominalisation of adjectives

Frequency: 24

Size metaphor names are also abundant with the naming units where the base remains unexpressed. In case of size, it can be called nominalisation of adjectives because literal adjectives expressing size exist (e.g. *little*, *tiny*, *big*, *huge*). The examples of the small birds are *oxeye*, *miller's thumb* (*Phylloscopus trochilus*), or *thumb* (*Troglodytes troglodytes*).

4.2.5.3 Summary of Size

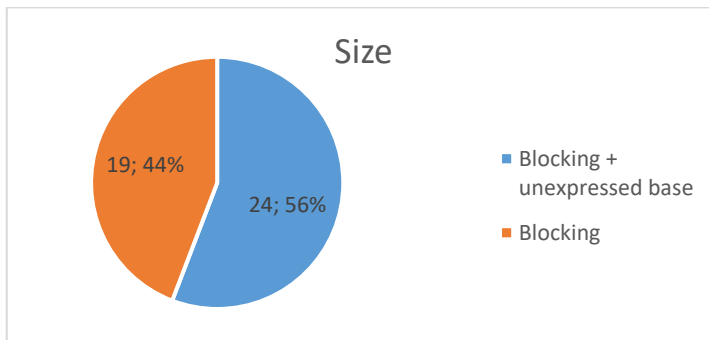| Size	
Blocking + nominalisation of adjectives	26
Blocking	20
Total	46

Table 5: Summary of Size

Figure 6: Graphical summary of Size

The presumed justification of metaphor for size is creating the names that are not already blocked by other birds. For a smaller half (44%), this was the only reason for using metaphor (e.g. *kitty-wren*, *dwarf auk, thumb-bird*).

The rest of the names (56%) are also formally simpler thanks to metaphor (*oxeye*, *miller's thumb*, *thumb*).

It is surprising that there is such rather significant number of names metaphorically expressing the salient feature *small*, considered that small birds are rather common, so the smallness does not seem to specify a bird so much. On the other hand, the use of large size as the salient feature depicted by metaphor was negligible, there are only three names expressing the feature *big*.

4.2.6 Dynamic salient feature

Frequency: 182

This chapter will deal with the birds' names containing metaphor that expresses the dynamic salient feature. As such feature will be understood the birds' actions or movements, the time or place of their occurrence, their relation to other beings or things, and other features that do not fall under the categories of physical appearance,

smell, taste, or sound (sound, although dynamic feature itself, was examined separately).

This category was probably the hardest to process. Although it is often apparent that the metaphor in a name refers to a dynamic feature, these metaphors tend to be less transparent because the dynamic features are not legible from the birds' appearance. The real motivation behind the name is not always easily researchable, and it does not help that the bird's actions or other contexts standing behind the metaphor are sometimes only alleged.

4.2.6.1 Lexical gap

Frequency: 93

In this category, there are the names that use metaphor to express a very specific situation, for which there is no English lexeme.

The features expressed metaphorically in the names of this category do appear to be literally expressible. For example, *boatswain gull* (*Stercorarius parasiticus*) probably received its name because it is often seen resting on boats. However, there is no lexeme in English that would mean "to rest on boats", or "something that rests on boats", and the whole phrases do not have the form that would allow them to be used as names. Therefore, the metaphor is used instead. A boatswain is someone whose characteristics is his frequent presence on boats and ships. Naturally, it is not the boatswain's only characteristics, which makes the resulting name less transparent, but the word is short enough to become the new naming unit or a part of one.

The lack of the adequate literal words describing activities, relations to the world, or other contexts seems to be the main reason for the use of metaphor in all names in the category of dynamic features. The salient features behind the names are very diverse. Let us have a look at some examples.

Mornful sparrow, *butcher bird*, and *murdering bird* (*Lanius excubitor*) are three names of a bird whose salient feature is its hunting technique, which lays in impaling the pray onto the large thorns. It is interesting that besides verb (*murder*), the activity can be also expressed by an adjective (*mornful*).

Robber bird (*Stercorarius parasiticus*) is so named because it feeds itself mostly on the quarry taken from the other birds of prey.

Goatsucker or *milker* (*Caprimulgus europaeus*) is a bird whose salient feature is its often presence around the cattle and goats, where it catches flies. However, it gives the impression that it is interested in the milk of the animals.

4.2.6.2 Lexical gap plus unexpressed base

Frequency: 89

Many of the names were even more economical, thanks to the nominal nature of the metaphor, which allowed the onomasiological base to remain unexpressed.
For example, the bird with the Latin name *Anthus pratensis* has several folk names belonging to this category, including *cuckoo's attendant*, *cuckoo's fool*, *cuckoo's footman*, *cuckoo's maid*, or *cuckoo's maiden*. The salient feature behind them is that the bird's nest is often chosen by cuckoos to lay their eggs in. This information cannot be compressed into a single literal expression, so the metaphors expressing the inferiority to the cuckoo were used, again, for the cost of transparency.

Some other examples are *cowboy* (*Turdus torquatus*), *skeleton* (*Tringa ochropus*), *shepherd* (*Sturnus vulgaris*).

Cowboy is named after its common presence around cows, where it catches flies. *Skeleton* is said to be named after its poor nutritive value, and *shepherd* is so named because it flies in flocks.

4.2.6.3 Summary of Dynamic salient feature

Dynamic salient feature	
Lexical gap	104
Lexical gag + unexpressed base	100
Total	204

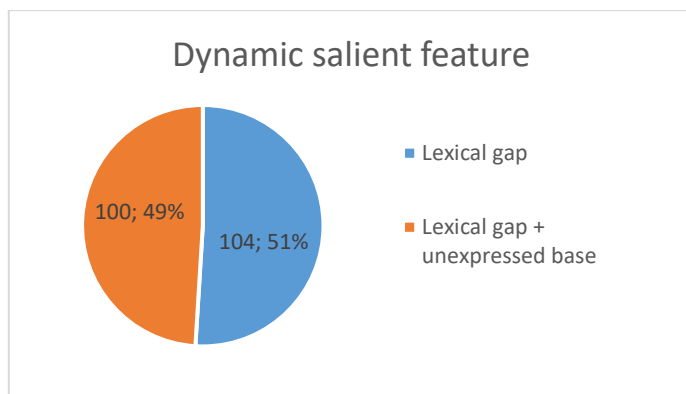Table 6: Summary of Dynamic salient feature

Figure 7: Graphical summary of Dynamic salient feature

The suggested justification of metaphor in all the names in this category is lexical gap, that is, the non-existence of suitable verb denoting a specific activity (e.g. *murdering bird*, *goatsucker*, *milker*).

 Almost half of the names also have the unexpressed onomasiological base, which is also allowed by metaphor (e.g. *cuckoo's maid*, *skeleton*, *cowboy*).

 I also registered a tendency concerning the source domains. Among 100 names with unexpressed base there are 58 names with a person as the source domain (e.g. *fisherman*, *sea-pilot*, *witch*, *scullery-maid, cowboy*), while there are only 14 names with a person as the source domain among the 104 names with the expressed base. Therefore, it appears that for the speakers, it is more natural not to express the base if a bird is called after a person or their function.

4.2.7 Merging more salient features into one metaphor

Frequency: 45
This section will deal with the bird names comprising metaphors that manage to refer to more than one salient feature.

 For illustration, let us have a look a few examples of such names.

 The metaphor in *snake bird* (*Jynx torquilla*) fuses up to three features. The bird is very thin and can stretch its neck, gaining the shape of a snake. In addition to that, in some situations, the bird makes writhing movements, resembling those of a snake. And finally, the pattern on the bird might resemble the pattern on some snakes. The metaphor therefore combines the quality of the shape, pattern, and dynamic feature.

 Motacilla alba also has several names expressing the same salient feature. The names include *dishwasher*, *peggy washdish, lady dishwash*, *scullery-maid*, and

washerwoman (the last three names belong to the following subcategory, as the base is unexpressed). The first salient feature is its inhabitation of places near water, by which it is often seen. The other feature is the bird's constant wiggling movements of the tail, which give the impression of a tireless busyness. These two dynamic features are combined in the source domain of a washerwoman or dishwasher, who used to do the laundry/dishes in the river. These names therefore combine two dynamic salient features.

Flax-spinning-wheel, *razor grinder*, and *gabble-ratcher* are the names for *Caprimulgus europaeus*, and they all metaphorically refer to the bird's constant fidget-like movements (dynamic feature) and the unusual purring sounds (quality).

Blood-linnet (*Acanthis cannabina*) has a bright red spot on its chest and head. Since the shapes look like actual bloody wounds, we can perceive the metaphor as fusing the quality of the colour and pattern.

As the examples show, there can be various combinations of the salient features condensed in a single metaphor, and more than two features can be involved.

4.2.7.1 Merging features plus unexpressed base

Frequency: 22
The names in this category combine the condensation of more features and non-expression of the base.

Examples of these names are *star* (*Sturnus vulgaris*), *moon* (*Regulus regulus*), *drum*, or *drumstick* (*Picoides major*).

Star is a bird that has dark, almost black plumage with blue and purple shimmering tint with small contrasting off-white dots, which immensely resembles the night starry sky. Therefore, what the metaphor maps onto the bird is the pattern and the colours of both the stars and the sky. This condensation along with the unexpressed base results into a formally simple name, whose potential literal equivalent of acceptable length is practically unthinkable.

Moon has a yellow area on its heads that has the appearance of a thin stripe, but the bird can also puff its feathers up, so the area acquires a round shape. The name *moon* thus refers to the yellowish colour of the moon and to its shape, or possibly even to the unstable nature of a waxing moon (dynamic salient feature).

Drum or *drumstick* are names for a woodpecker. The combined features are sound (the sound of a drum) and dynamic feature (the way the sound is created, that is, hitting something with something).

4.2.7.2 Summary of Merging more salient features

Merging more salient features	
Merging more salient features	23
Merging more salient features + unexpressed base	22
Total	45

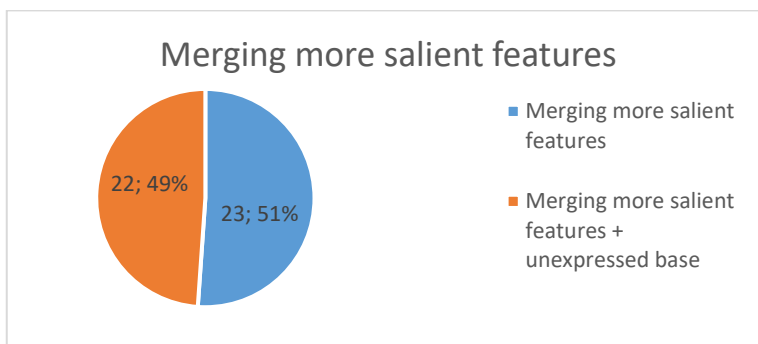Table 7: Summary of Merging more salient features

Figure 8: Graphical summary of Merging more salient features

The names in this category consist of metaphors that have the capacity to express more than one salient feature. There is a great diversity between the features combined (there are even combinations of static and dynamic features), and the number of the merged features may exceed two (e.g. *dishwasher*, *blood-linnet*, *razor grinder*).

Again, the onomasiological base remained unexpressed in some names. Those names make around a third of the sample (e.g. *star*, *moon*, *drum*).

4.3 Summary of the motivation for the use of metaphor

In this chapter, I would like to graphically summarize the different motivations that I came across in the previously described categories. Here, the motivations are presented independently on the salient features depicted.
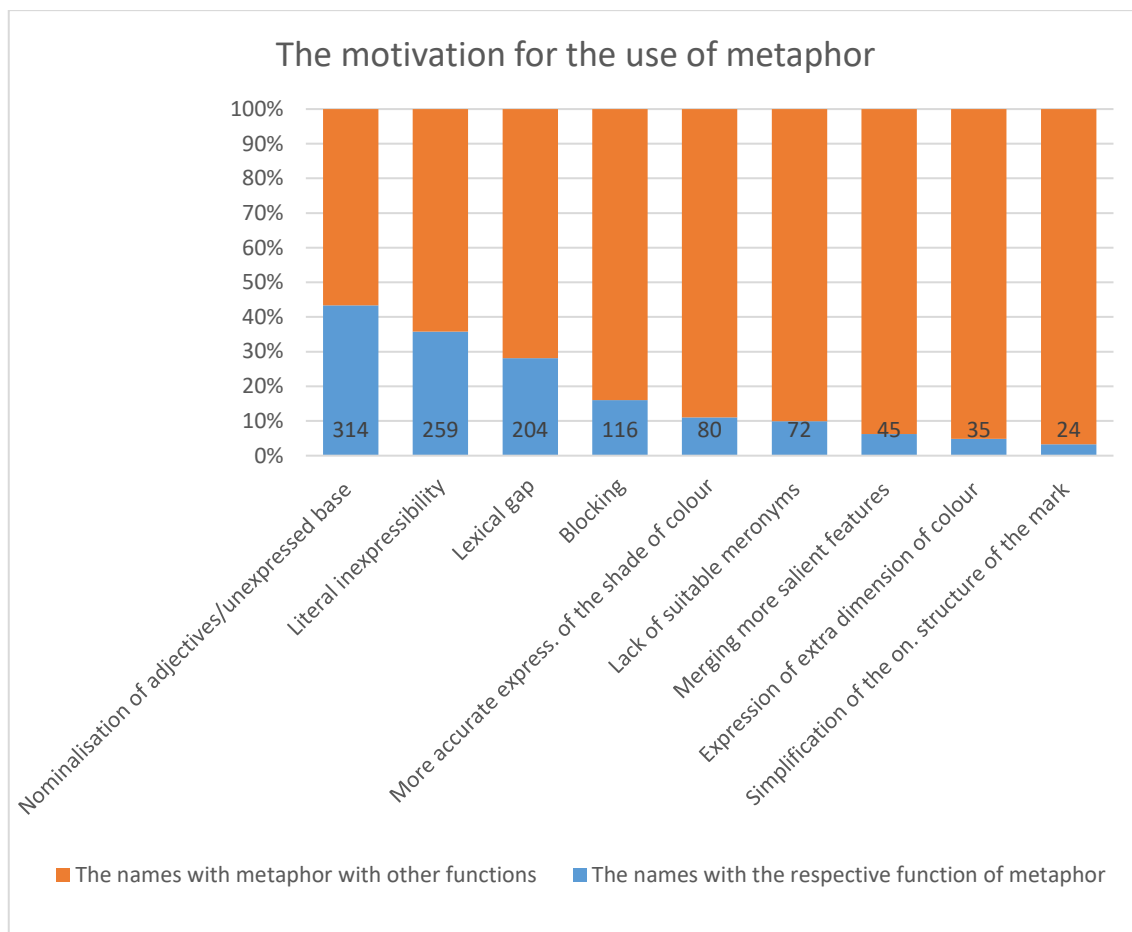
Figure 9: Graphical summary of the motivation for the use of metaphor

The chart features all the examined motivations of use of metaphor in bird names. The most common function of metaphor appears to be the possibility not to express the onomasiological base. It is a morphological function and a form of economy of expression, which can be applied when the metaphor has a nominal form. This function always appears in combination with some other function(s).

The second most productive function is expressing literally ineffable realities, such as shape and sound, and the third most common function is overcoming the lexical gap, that is, dealing with the non-existence of lexemes describing certain activities. Next is the function of blocking, which deals with recurring salient features that, thanks to metaphor, can be referred to more diversely. This motivation is followed by the attempt to express the shade of colour more accurately, the function exclusive for colour metaphor. The rest of the functions was represented by less than ten percent.

In the summary, I believe that there are two main tendencies behind the usage of metaphor in naming units: to create as economical names as possible (but without any

loss of meaning) and the aim to overcome the difficulties that the literal language has with expressing certain realities. As the former, we can understand the possibility not to express the onomasiological base, the simplification of the structure of the mark, merging more salient features into one metaphor, and even the more accurate expression of the shade of colour and extra dimension of colour (in case the salient colour is literally describable, but in a formally more complex way). As the latter, we can perceive the attempts to solve the literal inexpressibility, lexical gap, lack of suitable meronyms, and the more accurate expression of the shade of colour and extra dimension of colour (in case a shade is so specific that it is not literally expressible). The only function of metaphor that does not fit into these two tendencies is blocking.

5. Conclusion

This thesis aimed to examine the phenomenon of metaphors in naming units. It attempted to answer the question why the metaphorical expressions are used in the bird names, and whether there are any benefits in using them.

The approach to metaphor was that of image/resemblance metaphor, where the structure of a conventional mental image is mapped onto the structure of the target domain. The mental image can be both static and dynamic. It can be of a visual nature, but its source may also lay in sound, smell, taste, or feel. From the onomasiological viewpoint, metaphor is one of the possible ways of expressing the constituents of the onomasiological structure.

In attempt to find the motivation for using metaphor, 724 bird names were examined. Since it was presumed that the functions of metaphor might differ depending on the type of the salient feature that it represents, the names in the corpus were sorted by the types. Those were colour, shape, sound, pattern, size, and the other dynamic salient features. The combinations of salient features were also categorized separately.

In case of colour, the biggest part of the names appears to aim to solve the problem of the limited number of literal colour terms, which do not allow to express the specific shades precisely. The benefit of metaphor in these names is thus higher degree of accuracy.

Another suggested justification of colour metaphors was blocking. It was suggested that due to the potentially unlimited number of source domains, speakers can create various metaphorical names for the birds with the same salient feature, for which there might be a very limited number of literal expressions. Therefore, the speakers can avoid the already blocked names. The same tendency was observed in the category of size.

Metaphorical expressions for colour also manage to depict other dimensions of colour (such as saturation and lightness), not just the basic hue (like red or blue). The shades of colour depicted in these names would usually require multiword literal expressions, so this is a form of economy of expression.

In case of the salient features colour and size, metaphor can nominalise the literal adjectives, so they become able to stand on their own, and do not require the linguistic realisation of the onomasiological base. This is a form of economy of expression as described in Kos (2019). Since metaphor has the form of a noun

commonly, the base also could have remained unexpressed in many names from all the other categories, resulting in morphologically simpler names. In these cases, however, we cannot talk about nominalisation of literal adjectives since no such adjectives exist.

When it comes to shape, the main reason for using metaphor is that literal description of this feature is practically unthinkable, so if attempting to express the salient feature of shape, metaphor is the only option. The quality of sound also mostly defies literal expression, so it was concluded that literal inexpressibility is the main reason for using metaphor in names denoting sound as well.

Another significant function of metaphor is the fusion of the constituents of the onomasiological structure, such as PART and QUALITY. This allows morphologically simple names to contain more information. The function occurs among the shape metaphors, and it too can be perceived as a form of economy of expression.

In the category of pattern, another possible function of metaphor arose: the ability to refer to body parts for which there are no suitable meronyms.

The metaphors in names of the category of dynamic salient feature seem to be there because the action of the bird is so specific that the lexeme that would describe it simply does not exist in English. Metaphors thus fill in the space of lexical gaps.

The names in the last category described, merging more salient feature, showed that metaphor has the capacity to condense more salient features into one expression, and therefore contain more information about the organism on the space of acceptable length.

Most of these tendencies seem to fall under a certain type of economy of expression, or under the attempt to express phenomena that are difficult or even impossible to express literally.

Sources

The bird names in the corpus come from Desfayes, Michel. *A Thesaurus of Bird Names*. Musée Cantonal DHistoire Naturelle, 1998.

The pages used in the search for the origin of the metaphor in the bird names:

"Birds of the World - Comprehensive Life Histories for All Bird Species and Families." *Birds of the World - Cornell Lab of Ornithology*, birdsoftheworld.org/bow/home.

References

Cruse, D. A. *Lexical Semantics* (Cambridge textbooks in linguistics). Cambridge University Press, 1986.

Dokulil, M. *Tvoření slov v češtině. 1, Teorie odvozování slov*. 1st ed., Československá akademie věd, 1962.

Fernández-Domínguez, J. The onomasiological approach. In: Aronoff, M. (ed.), Oxford research encyclopedia of linguistics. Oxford: Oxford University Press, 2019.

Grady, J. Foundations of Meaning: Primary Metaphors and Primary Stress. Dissertation thesis. Berkley: University of California, 1997.

Kos, P. Metaphor and metonymy as a means of economy of expression, SKASE Journal of Theoretical Linguistics, 16/1, 2019.

Kos, P. & Kozubíková Šandová, J. Onomaziologické přístupy ke slovotvorbě. *Časopis pro moderní filologii*. Praha: FF UK, 2020, in print.

Lakoff, G. Image Metaphor. *Metaphor and Symbolic Activity.* Lawrence Erlbaum Associates, 1987, pp. 219-222.

Lakoff, G. & Johnson, M. *Metaphors We Live By*. The University of Chicago Press, 1980.

Lakoff, G. The Contemporary Theory of Metaphor. In: Ortony, A. (ed.), Metaphor and thought. Cambridge: Cambridge University Press, 1992.

Steinvall, A. *English Colour Terms in Context*. Umeå universitet, 2002.

Štekauer, P. Fundamental Principles of an Onomasiological Theory of English Word-Formation. *A Recollection of 11 Years of Onomasiology Online (2000-2010)*, edited by Joachim Grzega, 2001, pp. 15-55.

Ureña, J. M., & Faber, P. Reviewing imagery in resemblance and non-resemblance metaphors. Cognitive Linguistics, 21(1), 2010, pp. 123-149.

Wierzbicka, A. *Semantics: primes and universals*. Oxford University Press, 1966.

Appendix: The corpus

Here are the bird names in the corpus sorted by the types of the salient feature and suggested motivation for the use of metaphor (presented in the order used in the analysis):

Colour

More accurate expression of the shade:

blood-linnet (Acanthis cannabina), brand tail (Phoenicurus phoenicurus),brass-eyed poker-duck (Aythya fuligula), bull-headed wigeon (Aythya ferina), citril finch (Serinus citrinellus), common rosefinch (Carpodacus erythrinus), copperfinch (Fringilla coelebs), cream-coloured courser (Cursorius cursor), cream-coloured mow (Larus hyperboreus), elm-tree goldfinch (Carduelis chloris), ferruginous duck (Aythya nyroca), fire brantail (Phoenicurus phoenicurus), firebrand (Phoenicurus phoenicurus), fire-eyed chat (Sylvia undata), fireflirt (Phoenicurus phoenicurus), fire-redtail (Phoenicurus phoenicurus), fire-tail (Phoenicurus phoenicurus), firetail bob (Phoenicurus phoenicurus), fox-goose (Tadorna tadorna), frosty-back wigeon (Aythya marila), ginger-beer bird (Pyrrhula pyrrhula), golden-wren (Phylloscopus trochilus), granny gull (Larus marinus), hazel grouse (Bonasa bonasia), hell-diver (Tachybaptus ruficollis), char cock (Turdus viscivorus), chestnut-bellied sandgrouse (Pterocles exustus), marbled teal (Marmaronetta angustirostris), marigold finch (Carduelis carduelis), old hardwearther (Bucephala clangula), old hardweather (Aythya fuligula), old jack (Ardea cinerea), old will (Strix aluco), old will hicks (Strix aluco), oldhen (Stercorarius parasiticus), olivaceous warbler (Hippolais pallida), pallid swift (Apus pallidus), peacock (Pavo cristatus), peahen (Pavo cristatus), peanie (Pavo cristatus), philip-of-the-hemp (Carduelis chloris), pigeon hawk (Circus cyaneus), red firebrandtail (Phoenicurus phoenicurus), rose-linnet (Acanthis cannabina), rose-linnet (Acanthis flammea), silver plover (Charadrius squatarola), silver-grebe (Podiceps cristatus), silver-owl (Tyto alba), silver-pockard (Aythya marila), silver-rail (Porzana porzana), silvery-gull (Larus argentatus), sinai rosefinch (Carpodacus synoicus), slate-backed throstle (Turdus pilaris), smoky (Prunella modularis), smoukie (Circus cyaneus), snake bird (Jynx torquilla), snuff-headed wigeon (Aythya ferina), sooty gull (Larus hemprichi), sooty shearwater (Puffinus griseus), star-joe (Sturnus vulgaris), star-thrush (Sturnus vulgaris), tidley goldfinch (Regulus regulus), velvet-runner (Rallus aquaticus), waxen chatterer (Bombycilla garrulus), weasel-coot (Mergus albellus), weasel-duck (Mergus albellus), weasel-wigeon (Mergus albellus)

Blocking:

bare-faced crow (Corvus frugilegus), bishop carara (Gavia immer), blackbird-smith (Turdus merula), coal finch (Ficedula hypoleuca), coal kip (Sterna nigra), coal tit (Parus ater), coal-goose (Phalacrocorax carbo), cole-tit (Parus ater), colley (Turdus merula), colley-bird (Turdus merula), colley-thrush (Turdus merula), collier (Apus apus), colly (Turdus merula), decky-develing (Apus apus), devil-a-bit (Apus apus), deviling (Apus apus), devil's bird (Corvus corax), devil's bird (Motacilla alba), devil's bird (Apus apus), devil's bitch (Apus apus), devil's swift (Apus apus), devil-screecher (Apus apus), devil-skriker (Apus apus), devil-squeak (Apus apus), devil-squeaker (Apus apus), devil-swallow (Apus apus), devilton (Apus apus), dewlin (Apus apus), dicky-develin (Apus apus), harlequin duck (Histrionicus histrionicus), jacky-devil (Apus apus), little mealy-duck (Clangula hyemalis), mealy mouth (Sylvia curruca), mealy-bird (Clangula hyemalis), mountain-colley (Turdus torquatus), parson bird (Larus fuscus), parson gull (Larus marinus), parson mew (Larus fuscus), parson mew (Larus marinus), parson rook (Corvus frugilegus), seaford parson goose (Branta bernicla), snow goose (Anser caerulescens), snowy owl (Nyctea scandiaca), tommy-devil (Apus apus), water-colly (Cinclus cinclus)

Nominalisation of adjectives:

Bishop (Gavia immer), bride's page (Haematopus ostralegus), cathedral-parson (Corvus monedula), devil (Apus apus), gillie-bride (Haematopus ostralegus), harlequin (Bucephala clangula), church-parson (Corvus monedula), churchwarden (Phalacrocorax carbo), isle of Wigh paron (Phalacrocorax carbo), kill-

devil (Apus apus), miller (Circus cyaneus), miller (Sylvia communis), nun (Mergus albellus), parson (Phalacrocorax carbo), parson (Corvus corone), parson (Corvus frugilegus), parson (Corvus corax), pope (Fratercula arctica), scare-devil (Apus apus), screech-devil (Apus apus), sham-crow (Corvus monedula), snow-flake (Fringilla montifringilla), swing devil (Apus apus), white baker (Sylvia communis), white nun (Mergus albellus)

Extra dimension:

blood-hook (Pyrrhula pyrrhula), blood-olp (Pyrrhula pyrrhula), blossom-bird (Carduelis carduelis), golde-eye daver (Bucephala clangula), golden oriole (Oriolus oriolus), golden wren (Regulus regulus), golden-eyed duck (Aythya fuligula), golden-eyed duck (Bucephala clangula), golden-eyed garrot (Bucephala clangula), golden-eyed poker (Bucephala clangula), golden-eyed teal (Bucephala clangula), gold-eye duck (Aythya fuligula), goldfinch (Carduelis carduelis), goldfinch (Emberiza citronella), gold-lenny (Emberiza citronella), gold-linnet (Emberiza citronella), gold-spink (Emberiza citronella), goldspring (Emberiza citronella), orange-tufted sunbird (Nectarinia osea), parrot-woodpecker (Picus viridis), pranked jay (Garrulus glandarius), proud-tail (Carduelis carduelis), proud-tailor (Carduelis carduelis), purple sunbird (Nectarinia asiatica), pygmy sunbird (Anthreptes platurus (metallicus)), ruddy shelduck (Tadorna ferruginea), velvet duck   (Melanitta nigra), velvet scoter (Melanitta fusca), velvet-duck (Melanitta fusca)

Extra dimension + nominalisation of adjectives:

Duke (Anas platyrhynchos), captain (Carduelis carduelis), fool's coat (Carduelis carduelis), king-harry (Carduelis carduelis), lady-with-the-ten-flounces (Carduelis carduelis), sheriff's man (Carduelis carduelis)

More accurate expression of the shade + nominalisation of adjectives:

english-parrot (Picus viridis), flying-toad (Caprimulgus europaeus), half-moon (Regulus ignicapillus), hawk's eye (Regulus regulus), cherubin (Tyto alba), moon (Regulus regulus), mule (Anas Penelope), old man (Muscicapa striata), oldfellow (Acrocephalus scirpaceus), pea (Pavo cristatus), pheasant (Panurus biarmicus), star (Sturnus vulgaris), yellow-amber (Emberiza citronella)

Shape

Literal inexpressibility:

anchor-bird (Apus apus), awl bird (Recurvirosta avosetta), azores bullfinch (Pyrrhula murina), banjobill (Anas clypeata), barley-sower (Motacilla alba), barrel-tit (Aegithalos caudatus), barrel-tom (Aegithalos caudatus), bar-tailed godwit (Limosa lapponica), basket-hinger (Aegithalos caudatus), bottle (Botaurus stellaris), bottle-bird (Aegithalos caudatus), bottle-bump (Botaurus stellaris), bottle-tit (Aegithalos caudatus), bottle-tom (Aegithalos caudatus), bottle-tomtit (Aegithalos caudatus), bull-bird (Charadrius hiaticula), bullfinch (Pyrrhula pyrrhula), bullfrench (Pyrrhula pyrrhula), bullhead (Charadrius apricarius), bullhead (Charadrius squatarola), bullhead (Pyrrhula pyrrhula), bullhead plover (Charadrius squatarola), bull-headed wigeon (Aythya farina), bullie (Pyrrhula pyrrhula), bull-olp (Pyrrhula pyrrhula), bullspink (Pyrrhula pyrrhula), bullyhead (Carduelis chloris), button-quail (Turnix sylvatica), crotch tail (Milvus milvus), crotched-tailed puttock (Milvus milvus), fan wing (Falco tinnunculus), fan-tailed raven (Corvus rhipidurus), fan-tailed warbler (Cisticola juncidis), fan-winged hawk (Falco tinnunculus), fork-tail (Milvus milvus), fork-tail (Hirundo rustica), fork-tailed kite (Milvus milvus), griffon vulture (Gyps fulvus), gull-billed tern (Sterna nilotica), hoody-cock (Upupa epops), hornbill-bunting (Miliaria calandra), horse gull (Larus fuscus), horse gull (Larus fuscus), jack-in-a bottle (Aegithalos caudatus), letter-bird (Phalacrocorax carbo), liver-bird (Phalacrocorax carbo), oven bird (Phylloscopus trochilus), ovenbird (Phylloscopus collybitus), ovenbird (Aegithalos caudatus), oven-builder (Aegithalos caudatus), oventit (Phylloscopus trochilus), parrot-billed willock (Alca torda), parrot-billed willy (Alca torda), parrot-woodpecker (Picus viridis), pintail   (Anas acuta), pin-tailed sandgrouse (Pterocles alchata), razorbill (Alca torda), rocky-reedtail (Acanthis flavirostris), salmon-tailed kite (Milvus milvus), sawbill (Mergus serrator), sawbill (Mergus merganser), sawbill (Mergus albellus), sawbill daver (Mergus serrator), sawbill duck (Mergus serrator), sawbill wigeon (Mergus serrator), saw-billed duck (Mergus serrator), sawneb

(Mergus serrator), sawneb (Mergus merganser), saw-nebbed duck (Mergus merganser), sawyer (Mergus serrator), sawyer (Mergus merganser), scooper (Recurvirostra avosetta), shear-tail (Sterna hirundo), sheep's-head-and-pluck (Gavia stellate), shoe awl (Recurvirostra avosetta), shoeing horn (Recurvirostra avosetta), shovelbill (Anas clypeata), shoveler (Anas clypeata), sickle-bill (Plegadis falcinellus), snake bird (Jynx torquilla), spear-drake (Mergus serrator), spear-duck (Mergus serrator), spear-duck (Mergus merganser), spear-wigeon (Mergus serrator), spear-wigeon (Mergus merganser), spike-billed wigeon (Mergus serrator), spoonbeak (Anas clypeata), spoonbill (Anas clypeata), spoonbill (Platalea leucorodia), spoonbill duck (Anas clypeata), spoonsteil (Pica pica), stumpey (Perdix perdix), stump-tail (Perdix perdix), stumpy (Perdix perdix), swallow-tailed sheldrake (Clangula hyemalis)

Literal inexpressibility + unexpressed base:

Awl (Recurvirostra avosetta), bank-bottle (Phylloscopus trochilus), bank-bottle (Phylloscopus collybitus), bank-jug (Phylloscopus trochilus), bank-jug (Phylloscopus collybitus), banty-jug (Phylloscopus collybitus), blue-bottle (Parus caeruleus), bottlejug (Aegithalos caudatus), bush-oven (Aegithalos caudatus), canbottle (Aegithalos caudatus), cobble (Gavia stellate), cobble (Gavia immer), cobbler's awl (Recurvirostra avosetta), corn-dumpling (Miliaria calandra), cut throat (Sylvia communis), english-parrot (Picus viridis), flying-toad (Caprimulgus europaeus), gray cob (Larus fuscus), grey cob (Larus argentatus), ground-barrel (Phylloscopus trochilus), ground-oven (Phylloscopus trochilus), gryffon (Gyps fulvus), harpaye (Circus aeruginosus), hatful-o'feathers (Aegithalos caudatus), hedge-jug (Phylloscopus collybitus), hedge-jug (Aegithalos caudatus), cherubin (Tyto alba), chop-hats (Numida Meleagris), jug (Aegithalos caudatus), knob (Pyrrhula pyrrhula), knot (Calidris canutus), lesser cob (Larus fuscus), mug-pot (Aegithalos caudatus), oven's nest (Aegithalos caudatus), parrot (Alca torda), rose-muffin (Aegithalos caudatus), sand-oven (Riparia riparia), sea-cobble (Gavia immer), sea-parrot (Alca torda), stub (Perdix perdix), stump (Perdix perdix), swap-hats (Numida meleagris)

Literal inexpressibility + simplification of the onomasiological structure of the mark:

Bonnettie (Podiceps cristatus), booted eagle (Hieraaetus pennatus), crowned crane (Balearica pavonina), eared grebe (Podiceps nigricollis), eared-owl (Asio otus), great horned owl (Bubo bubo), horn-coot (Asio otus), horned dabchick (Podiceps cristatus), horned doucker (Podiceps cristatus), horned-lark (Eremophila alpestris), horned-owl (Asio otus), horner (Mergus serrator), horn-owl (Asio otus), hornpie (Vanellus vanellus), horny-hoolet (Asio otus), horny-owl (Asio otus), hornywink (Vanellus vanellus), long-eared owl (Asio otus), long-ears (Asio otus), long-horned owl (Asio otus), stilt-plover (Himantopus himantopus)

Literal inexp. + unexpressed base + simplification of the on. structure of the mark:

Horniwig (Vanellus vanellus), ruff (Philomachus pugnax), stilt (Himantopus himantopus)

Sound

Literal inexpressibility:

Barker (Limosa limosa), barker (Tringa erythropus), bell-bird (Parus major), cat gull (Larus ridibundus), cricket-bird (Locustella naevia), cricket-bird (Locustella naevia), cricket-chirper (Locustella naevia), cricket-chirper (Locustella naevia), cricket-teal (Anas querquedula), cry-baby bunting (Emberiza citronella), gabble-ratcher (Caprimulgus europaeus), gabble-ratcher (Caprimulgus europaeus), gabbleratchet (Caprimulgus europaeus), grasshopper-chirper (Locustella naevia), grasshopper-lark (Locustella naevia), grasshopper-warbler (Locustella naevia), grasshopper-wren (Locustella naevia), horse-cock (Gallinago gallinago), jerry spinner (Caprimulgus europaeus), laughing betsy (Picus viridis), laughing bird (Picus viridis), laughing dove (Streptopelia senegalensis), laughing goose (Anser albifrons), laughing gull (Larus argentatus), laughing gull (Larus ridibundus), laughing-owl (Asio otus), mowing-machine bird (Locustella naevia), musical wailer (Numenius arquata), nightingale's friend (Acrocephalus scirpaceus), purrin bird (Caprimulgus europaeus), rattlesnake-bird (Locustella naevia), razor grinder (Caprimulgus europaeus), razzor grinder (Locustella naevia), sawfinch (Parus major), saw-sharpener

(Parus major), saw-whetter (Parus major), scissors grinder (Caprimulgus europaeus), spinning jenny (Caprimulgus europaeus), talking jack (Corvus monedula), trumpeter finch (Carpodacus githagineus), wheelbird (Caprimulgus europaeus), whistle-wing (Bucephala clangula), whistling dovyer (Charadrius apricarius), whistling sandpiper (Tringa ochropus)

Literal inexpressibility + unexpressed base:

air goat (Gallinago gallinago), airy goat (Gallinago gallinago), bellringer (Aegithalos caudatus), bog-drum (Botaurus stellaris), bull o'Prestwick (Botaurus stellaris), bull-of-the-mire (Botaurus stellaris), cry-baby (Emberiza citronella), drum (Picoides major), drummer (Botaurus stellaris), drumstick (Picoides major), evening goat (Gallinago gallinago), fiddler (Tringa hypoleucos), flax-spinning-wheel (Caprimulgus europaeus), god's goat (Gallinago gallinago), hammer-bleat (Gallinago gallinago), handsaw (Ardea cinereal), chinting-hound (Larus ridibundus), jacksaw (Parus major), kid of the air (Gallinago gallinago), kid of the spring (Gallinago gallinago), little goat of the night (Gallinago gallinago), minstrel of the seashore (Anthus spinoletta), moor-drum (Botaurus stellaris), moorlamb (Gallinago gallinago), saw-sharpener (Parus major), saw-whet (Parus major), sharpsaw (Parus major), sky goat (Gallinago gallinago), spinner (Caprimulgus europaeus), summer lamb (Gallinago gallinago), tinker (Parus major), tinker-tinker (Parus major), wheal (Caprimulgus europaeus), whistle of the waste (Charadrius apricarius), wood hammer (Picoides major)

Pattern

Literal inexpressibility:

barnacle goose (Branta leucopsis), barnacle-goose (Branta bernicla), blood-linnet (Acanthis cannabina), cat-head (Charadrius hiaticula), cat-poll (Charadrius hiaticula), harlequin duck (Histrionicus histrionicus), marbled teal (Marmaronetta angustirostris), owl-thrush (Turdus viscivorus), painted duck (Bucephala clangula), snake bird (Jynx torquilla), star-joe (Sturnus vulgaris), star-thrush (Sturnus vulgaris), tortoise-shell goose (Anser albifrons)

Literal inexpressibility + unexpressed base:

Barnacle (Branta bernicla), flying-toad (Caprimulgus europaeus), half-moon (Regulus regulus), harlequin (Bucephala clangula), hawk's eye (Regulus regulus), moon (Regulus regulus), Norway barnacle (Branta leucopsis), nothern barnacle (Branta leucopsis), sea-bernicle (Branta bernicla), star (Sturnus vulgaris), Wexford barnacle (Branta leucopsis)

Lack of suitable meronyms:

cravat-goose (Branta canadensis), bridle-duck (Aythya marila), bearded reedling (Panurus biarmicus), bearded titmouse (Panurus biarmicus), billy blackcap (Pyrrhula pyrrhula), blackcap mew (Larus ridibundus), black-capped billy (Parus major), black-capped peggy (Sylvia atricapilla), black-capped tit (Parus major), black-eared wheater (Oenanthe hispanica), black-hudie (Emberiza schoeniclus), blak-capped tit (Parus montanus (P. atricapillus)), cissy-blubonnet (Parus caeruleus), coal-hooden (Parus ater), cock-bluebonnet (Parus caeruleus), colehoodie (Sylvia atricapilla), colehooding (Sylvia atricapilla), corney-of-the-cravat (Charadrius hiaticula), goggle-eyed plover (Burhinus oedicnemus), hooded crow (Corvus corone), hooded crow (Corvus corone), hoodie (Corvus corone), hoodie-craw (Corvus corone), hoodie-craw (Corvus corone), hood-pecker (Picus viridis), hoody (Corvus corone), masked shrike (Lanius nubicus), masked shrike (Lanius nubicus), masked shrike (Lanius nubicus), moustached warbler (Acrocephalus melanopogon), saddleback (Corvus corone), saddleback-crow (Corvus corone), spectacled warbler (Sylvia conspicillata), spectacled-duck (Bucephala clangula), tony-hood (Pyrrhula pyrrhula), weasel-coot (Mergus albellus), weasel-duck (Mergus albellus), weasel-wigeon (Mergus albellus), whisker-bird (Miliaria calandra), white-crowned black wheater (Oenanthe leucopyga), white-eyed gull (Larus leucophthalmus)

Lack of suitable meronyms + unexpressed base:

blue-sleeves (Circus cyaneus), big bluebonnet (Parus major), blackbonnet (Sylvia atricapilla), blackcap (Saxicola torquata (S. rubicola)), blackcap (Sylvia atricapilla), blackcap (Parus major), blackcap (Parus ater), blackcap (Parus palustris), blackcap (Pyrrhula pyrrhula), blue-bonnet (Parus caeruleus), bluecap (Parus caeruleus), blue-jacket (Parus caeruleus), coalhood (Emberiza schoeniclus), coal-hood (Parus ater), coal-hood (Pyrrhula pyrrhula), coally-hood (Pyrrhula pyrrhula), colehood (Sylvia atricapilla), cole-hood (Emberiza schoeniclus), greater blackcap (Parus caeruleus), kingharry-blackcap (Sylvia atricapilla), little blackcap (Parus ater), mealy mouth (Sylvia communis), mitten (Circus cyaneus), monk (Sylvia atricapilla), redcap (Acanthis cannabina), ruff (Circus cyaneus), rushcap (Emberiza schoeniclus), seave cap (Emberiza schoeniclus), wee-bluebonnet (Parus caeruleus), whitebeard (Sylvia communis), whitecap (Phoenicurus phoenicurus)

Size

Blocking:

brown kittywren (Troglodytes troglodytes), button-quail (Turnix sylvatica), dwarf auk (Alle alle), griffon vulture (Gyps fulvus), half-bird (Anas querquedula), half-bird (Anas crecca), half-bird (Numenius phaeopus), half-duck (Anas crecca), half-fowl (Anas crecca), half-whaup (Numenius phaeopus), kitty-longtail (Aegithalos caudatus), kitty-me-wren (Troglodytes troglodytes), kitty-tope (Troglodytes troglodytes), kitty-wren (Troglodytes troglodytes), oxeye-creeper (Certhia familiaris), pygmy owl (Glaucidium passerinum), thumb-bird (Regulus regulus), tomthumb   (Phylloscopus trochilus), tom-thumb (Regulus regulus), tom-thumb (Parus caeruleus)

Blocking + nominalisation of adjectives:

black oxeye (Parus ater), blue-oxeye (Parus caeruleus), brown kitty (Troglodytes troglodytes), bull's eye (Charadrius hiaticula), bullseye (Vanellus spinosus), bullseye (Charadrius squatarola), creak-mouse (Aegithalos caudatus), cutty-queen (Troglodytes troglodytes), gryffon (Gyps fulvus), harpaye (Circus aeruginosus), hawkseye (Phylloscopus trochilus), kitty (Troglodytes troglodytes), miller's thumb (Phylloscopus trochilus), miller's thumb (Phylloscopus collybitus), miller's thumb (Regulus regulus), miller's thumb (Aegithalos caudatus), oxeye (Phylloscopus trochilus), oxeye (Phylloscopus collybitus), oxeye (Parus caeruleus), sea kitty (Larus canus), sea-kitty (Larus tridactylus), thumb (Troglodytes troglodytes), underground-oxeye (Phylloscopus trochilus), underground-oxeye (Phylloscopus trochilus), underground-oxeye (Phylloscopus collybitus), underground-oxeye (Phylloscopus collybitus)

Dynamic salient feature

Lexical gap:

barnacle-goose (Branta bernicla), barnacle goose (Branta leucopsis), boatswain gull (Stercorarius parasiticus), boatswain gull (Stercorarius pomarinus), butcher bird (Lanius excubitor), cad crow (Corvus corax), carpenter bird (Picus viridis), coldarse-bird (Turdus pilaris), college-bird (Corvus monedula), coot teaser (Circus aeruginosus), corpse bird (Owls), corpse-bird (Caprimulgus europaeus), cuckoo waker (Jynx torquilla), death bird (Owls), dew-fall hawk (Caprimulgus europaeus), dipper (Alcedo atthis), dippity-washty (Motacilla alba), dishwasher (Motacilla alba), dishydash (Motacilla alba), dishywashy (Motacilla alba), fan hawk (Falco tinnunculus), farmer's nightingale (Prunella modularis), fisherman's nightingale (Acrocephalus scirpaceus), gabble-ratcher (Caprimulgus europaeus), goatsucker (Caprimulgus europaeus), god almighty's wren (Troglodytes troglodytes), god's bird (Columba palumbus), god's bird (Erithacus rubecula), god's cock (Erithacus rubecula), god's hen (Troglodytes troglodytes), grasshopper-chirper (Locustella naevia), grasshopper-lark (Locustella naevia), grasshopper-warbler (Locustella naevia), grasshopper-wren (Locustella naevia), greedy-glade (Rapaces (Raptors)), greedy-gled, (Rapaces (Raptors)), gull teaser (Stercorarius parasiticus), hatter-flitter (Gallinago gallinago), hawk-owl (Asio flammeus), heaven's hen (Alauda arvensis), herald-wind (Turdus pilaris), honney buzzard (Vanellus vanellus), jerry spinner (Caprimulgus europaeus), jester-bird (Sturnus vulgaris), joybird (Garrulus glandarius), jugger falcon (Falco jugger), juggler (Phylloscopus collybitus),

juggy-wren (Phylloscopus collybitus), king's fisher (Alcedo atthis), lady dishwasher (Motacilla alba), lady dishywashy (Motacilla alba), lady o'heaven's hen (Troglodytes troglodytes), moll-washer (Motacilla alba), molly-washdish (Motacilla alba), mornful sparrow (Lanius excubitor), mouse hawk (Asio flammeus), murdering bird (Lanius excubitor), murdering pie (Lanius excubitor), musket hawk (Accipiter nisus), nanny-washtail (Motacilla alba), norway thrush (Turdus iliacus), our lady's hen (Troglodytes troglodytes), paddy washdish (Motacilla alba), peggy washdish (Motacilla alba), pilot owl (Asio flammeus), ploughman's bird (Erithacus rubecula), polly-dishwasher (Motacilla alba), polly-washdish (Motacilla alba), puck-bird (Caprimulgus europaeus), queen of heaven's hen (Alauda arvensis), rape-scraper (Crex crex), razor grinder (Caprimulgus europaeus), razor grinder (Caprimulgus europaeus), robber bird (Stercorarius parasiticus), robber bird (Catharactes skua), sally-washdish (Motacilla alba), scissors grinder (Caprimulgus europaeus), scraber (Puffinus puffinus), scribble-bunting (Miliaria calandra), scribble-lark (Miliaria calandra), scribbling-finch (Emberiza citronella), scribbling-lark (Miliaria calandra), scribes (Emberiza citronella), sentinel shrike (Lanius excubitor), sentinel shrike (Lanius excubitor), school-bird (Calidris), sleeper (Calidris), snail-jobber (Erithacus rubecula), snake bird (Jynx torquilla), spinning jenny (Caprimulgus europaeus), spinning jenny (Caprimulgus europaeus), squirrel-bird (Certhia familiaris), teaser (Stercorarius parasiticus), tom-sailor (Hydrobates pelagicus), washerdisher (Motacilla alba), water-washdisher (Motacilla alba), wheelbird (Caprimulgus europaeus), wheelbird (Caprimulgus europaeus), wood-sucker (Picus viridis), wren's man (Prunella modularis), writing-bird (Emberiza citronella), writing-lark (Miliaria calandra), writing-linnet (Emberiza citronella), yellow washdisher (Motacilla flava)

Lexical gap + unexpressed base:

barnacle (Branta bernicla), boatswain (Stercorarius parasiticus), boatswain (Stercorarius pomarinus), boatswain (Stercorarius longicaudus), butcher boy (Lanius excubitor), corpse-hound (Caprimulgus europaeus), cowboy (Turdus torquatus), cuckoo mate (Jynx torquilla), cuckoo's attendant (Anthus pratensis), cuckoo's fool (Anthus pratensis), cuckoo's footman (Anthus pratensis), cuckoo's harbinger (Jynx torquilla), cuckoo's leader (Jynx torquilla), cuckoo's maid (Anthus pratensis), cuckoo's maid (Anthus trivialis), cuckoo's maiden (Anthus pratensis), cuckoo's marrow (Jynx torquilla), cuckoo's mate (Jynx torquilla), cuckoo's mate (Phylloscopus collybitus), cuckoo's messenger (Jynx torquilla), cuckoo's waiting maid (Anthus pratensis), devil's dear pet (Troglodytes troglodytes), dishlick (Motacilla alba), dishlick (Motacilla alba), dishwash (Motacilla alba), dishwipe (Motacilla alba), dishwipe (Motacilla alba), drum (Picoides major), drumstick (Picoides major), fallow smith (Oenanthe Oenanthe), farm labourer (Corvus frugilegus), fisherman (Ardea cinereal), fish-thief (Alcedo atthis), flamborough head pilot (Fratercula arctica), flax-spinning-wheel (Caprimulgus europaeus), god almighty's scholar (Sturnus vulgaris), hammer-bleat (Gallinago gallinago), handstir (Motacilla alba), hatter-flight (Gallinago gallinago), herdsman (Gavia immer), herdsman-of-the-sea (Gavia immer), honey-kite (Pernis apivorus), keeper's friend (Garrulus glandarius), keeper's watchdog (Garrulus glandarius), lady dishwash (Motacilla alba), lady washdish (Motacilla alba), little miller (Sylvia curruca), long-tailed farmer (Aegithalos caudatus), master of the copse (Turdus philomelos), milker (Caprimulgus europaeus), mountain star (Charadrius apricarius), musket (Accipiter nisus), musket (Rapaces (Raptors)), nightingale's mate (Fringilla teydea), Norway barnacle (Branta leucopsis), nothern barnacle (Branta leucopsis), poke-bag (Aegithalos caudatus), poke-pudding (Aegithalos caudatus), puck (Caprimulgus europaeus), pudding-bag (Aegithalos caudatus), pudding-poke (Aegithalos caudatus), riphook (Accipiter nisus), rüppell's weaver (Ploceus galbula), scout (Phalacrocorax carbo), scribble-master (Miliaria calandra), scribbling-schoolmaster (Miliaria calandra), scullery-maid (Motacilla alba), sea-bernicle (Branta bernicla), sea-pilot (Haematopus ostralegus), sentry of the hedgrow (Sylvia communis), sheep's guide (Charadrius apricarius), sheperdess (Motacilla flava), shepterd (Sturnus vulgaris), schoolmaster (Miliaria calandra), singing skyrocket (Sylvia communis), skeleton (Tringa ochropus), skittery-deacon (Tringa tetanus), spinner (Caprimulgus europaeus), spit-of-the-fisher (Alcedo atthis), stonesmith (Oenanthe Oenanthe), strawmouse (Sylvia communis), tree-mouse (Certhia familiaris), underground-millermouse (Phylloscopus trochilus), wandering-jew (Vanellus vanellus), warden of the marshes (Tringa tetanus), washdish (Motacilla alba), washerwoman (Motacilla alba), water-junket (Calidris), water-witch (Hydrobates pelagicus), Wexford barnacle (Branta leucopsis), wheal (Caprimulgus europaeus), wheal (Caprimulgus europaeus), whip (Apus apus), wind (Charadrius morinellus), witch (Hydrobates pelagicus), witch-storm (Hydrobates pelagicus), wood hammer (Picoides major), wood hammer (Picoides major), woodcock pilot (Troglodytes troglodytes), writing-master (Miliaria calandra)

Merging more salient features

Merging more salient features + unexpressed base:

Barnacle (Branta bernicla), drum (Picoides major), drumstick (Picoides major), english-parrot (Picus viridis), flax-spinning-wheel (Caprimulgus europaeus), flying-toad (Caprimulgus europaeus), gryffon (Gyps fulvus), half-moon (Regulus regulus), harlequin (Bucephala clangula), harpaye (Circus aeruginosus), hawk's eye (Regulus regulus), cherubin (Tyto alba), moon (Regulus regulus), Norway barnacle (Branta leucopsis), nothern barnacle (Branta leucopsis), pheasant (Panurus biarmicus), sea-bernicle (Branta bernicla), spinner (Caprimulgus europaeus), star (Sturnus vulgaris), Wexford barnacle (Branta leucopsis), wheal (Caprimulgus europaeus), wood hammer (Picoides major)

Merging more salient features:

barnacle-goose (Branta bernicla), barnacle goose (Branta leucopsis), blood-linnet (Acanthis cannabina), bull-headed wigeon (Aythya farina), gabble-ratcher (Caprimulgus europaeus), griffon vulture (Gyps fulvus), hammer-bleat (Gallinago gallinago), hammerhead (Coccothraustes Coccothraustes), harlequin duck (Histrionicus histrionicus), jerry spinner (Caprimulgus europaeus), marbled teal (Marmaronetta angustirostris), parrot-woodpecker (Picus viridis), razor grinder (Caprimulgus europaeus), razor grinder (Caprimulgus europaeus), scissors grinder (Caprimulgus europaeus), snake bird (Jynx torquilla), spinning jenny (Caprimulgus europaeus), star-joe (Sturnus vulgaris), star-thrush (Sturnus vulgaris), weasel-coot (Mergus albellus), weasel-duck (Mergus albellus), weasel-wigeon (Mergus albellus), wheelbird (Caprimulgus europaeus)