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Lexical-Semantic Principles Of Invertebrate Naming In English And Uzbek Languages

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Abstract: This article investigates the lexical-semantic principles underlying the naming of invertebrates in English and Uzbek from a comparative perspective. The findings indicate that English invertebrate zoonyms are predominantly descriptive and associative, motivated by salient perceptual features such as shape, texture, habitat, behavior, and resemblance to familiar objects or animals. In contrast, Uzbek invertebrate naming is largely characterized by a strong taxonomic-terminological layer, with a high proportion of internationally standardized and Russian-mediated loan terms, as well as collective category names. The comparative analysis highlights the productivity of compounding patterns in English (N+N, Adj+N), whereas Uzbek demonstrates greater dependence on scientific classification and terminological standardization.

Keywords: Invertebrates, zoonym, nomination, lexical-semantic analysis, motivation, compounding, descriptive naming, metaphorical naming, taxonomic terminology, comparative typology.

Introduction: Invertebrates constitute the largest and most diverse group in the animal kingdom, encompassing a vast range of organisms that differ significantly in morphology, habitat, and biological function. Due to this diversity, the linguistic mechanisms used to name invertebrates provide valuable insight into how speakers conceptualize, categorize, and interpret the natural world. Animal names (zoonyms) do not merely serve as labels but reflect cognitive processes, cultural experience, and linguistic typology.

In English and Uzbek, the naming of invertebrates has developed under different historical, cultural, and scientific conditions. English invertebrate zoonyms often demonstrate a strong tendency toward descriptive and metaphorical nomination, relying on visual resemblance, habitat, and observable behavior. Uzbek, by contrast, shows a greater reliance on taxonomic terminology, international scientific borrowings, and historically established monolexemic forms. These differences make the invertebrate lexical layer particularly suitable for comparative lexical-semantic analysis.

The present study focuses on the lexical-semantic principles underlying the naming of invertebrates in English and Uzbek, with special attention to external appearance, including color, shape, texture, and pattern. By examining a large corpus of invertebrate names, the study aims to identify dominant nominative motivations, word-formation models, and typological differences between the two languages. The relevance of the research lies in its contribution to comparative linguistics, zoonymic studies, and cognitive approaches to nomination.

LITERATURE REVIEW

The study of animal naming has a long tradition in linguistics and related disciplines. Early research into lexical nomination and semantic motivation can be traced to works on lexical semantics, onomasiology, and cognitive linguistics. Scholars such as J. Trier [8], S. Ullmann [9], and G. Stern [7] emphasized the role of semantic fields and motivation in lexical development, while later cognitive linguists highlighted metaphor, categorization, and embodied perception as central mechanisms in naming.

Within zoonymic studies, animal names have been examined from etymological, cultural, and typological perspectives. English zoonymy has been widely addressed in lexicographic and cognitive studies, particularly in relation to metaphorical naming (e.g.,

starfish, jellyfish, sea cucumber) and compound word formation. Researchers have shown that English animal names frequently reflect folk taxonomy and perceptual salience rather than strict biological classification.

In Uzbek linguistics, animal names have primarily been studied within the framework of terminology, lexicology, and ethnolinguistics. Research has focused on native zoological vocabulary, loanword adaptation, synonymy, and semantic shifts in animal names. However, most studies concentrate on vertebrates or culturally salient animals, while invertebrates remain comparatively underexplored. Existing works tend to describe taxonomic systems rather than analyze nominative motivation in a comparative context.

Despite the growing interest in comparative lexical studies, there is a noticeable lack of systematic research devoted specifically to the lexical-semantic naming principles of invertebrates in English and Uzbek. This gap highlights the need for a focused comparative analysis that integrates linguistic typology, cognitive semantics, and zoological terminology. The present study seeks to fill this gap by providing a structured analysis of invertebrate zoonyms across the two languages.

METHODS

The material for this study consists of more than 300 invertebrate names collected from English and Uzbek sources. The English corpus includes commonly used vernacular names of invertebrates drawn from zoological dictionaries, encyclopedias, academic reference works, and educational materials. The Uzbek corpus comprises an extensive list of invertebrate names covering major taxonomic groups, including Protozoa, Cnidaria, Platyhelminthes, Nematoda, Annelida, Mollusca, Arthropoda, Echinodermata, and several minor phyla.

The research employs a comparative lexical-semantic method, allowing for the identification of similarities and differences in nominative principles across languages. The analysis is based on several complementary approaches:

a) Semantic-motivational analysis, used to determine the primary features motivating each zoonym (color, shape, texture, habitat, behavior, resemblance).

b) Structural analysis, applied to identify dominant word-formation models, such as monolexemic forms, compounds (N+N, Adj+N), and terminological constructions.

c) Typological comparison, aimed at revealing language-specific strategies of nomination and categorization.

d) Descriptive and classificatory methods, employed to group zoonyms according to semantic criteria and taxonomic affiliation.

The study deliberately excludes Latin binomial nomenclature as an object of analysis, focusing instead on vernacular and semi-terminological names functioning within each language. Quantitative observations are used to support qualitative findings, though the primary emphasis remains on semantic interpretation rather than statistical modeling. Through this methodological framework, the study seeks to provide a comprehensive account of how invertebrates are linguistically conceptualized in English and Uzbek, and how linguistic structure, cognition, and scientific tradition interact in zoonym formation.

DISCUSSION

Invertebrates constitute the largest and most diverse group in the animal kingdom, and the naming principles applied to this group in English and Uzbek vividly reflect language-specific patterns of cognition, categorization, and worldview. Based on the analysis of more than 300 invertebrate names drawn from both languages, this section focuses on nomination motivated by external appearance, particularly color, shape, texture, and visual resemblance.

In Uzbek, the nomination of invertebrates is frequently motivated by color attributes and morphological characteristics, which serve as primary distinguishing features. The most productive color terms include oq (white), qora (black), qizil (red), sariq (yellow), yashil (green), as well as metallic descriptors such as kumush (silver) and oltin (gold).

Color-based names in Uzbek often carry additional semantic nuances. For instance, oq does not merely denote whiteness but frequently implies transparency or lack of pigmentation, as seen in Oq planariya (Dendrocoelum lacteum). The adjective qora is commonly associated with danger, toxicity, or nocturnal activity, exemplified by Qoraqurt (Latrodectus tredecimguttatus). Similarly, qizil and sariq function as salient visual markers, especially in medically or ecologically significant species such as Qizil chuvalchang (Lumbricus rubellus) and Sariq chayon (Leiurus quinquestriatus).

In addition to color, shape and body structure play a crucial role in Uzbek invertebrate nomination. Taxonomic labels such as Yassi chuvalchanglar (Platyhelminthes) and Yumaloq chuvalchanglar (Nematoda) directly encode geometric form. Surface features are also lexically salient, as seen in Tikanboshlilar (Acanthocephala), Ko‘p tukli chuvalchanglar (Polychaeta), and Qalqonli kanalar

(Oribatida), where body coverings and defensive structures motivate naming.

A smaller but significant subset of Uzbek invertebrate names is based on metaphorical resemblance, particularly in marine organisms. Examples such as Dengiz yulduzi, Dengiz bodringi, and Dengiz liliyasi demonstrate analogy-based nomination, although these forms often represent calques from international or English terminology rather than independent folk coinages.

In English, the lexical-semantic system of invertebrate naming is characterized by a strong preference for descriptive and metaphorical nomination. External similarity, visual imagery, and explicit description are dominant motivating factors.

Color-based naming is highly productive and typically transparent. Lexemes such as Black Widow, Black Fly, Blue-ringed Octopus, Red Fire Ant, White Butterfly, and Silverfish encode visually salient traits that facilitate immediate identification. Metallic descriptors (silver, golden) often emphasize surface sheen or coloration, as in Silverfish and Golden Orb-weaver.

Beyond color, English extensively exploits shape and pattern as naming motivators. Pattern-based metaphors include Tiger Beetle, Leopard Slug, and Painted Lady, where stripes, spots, or variegated coloration evoke familiar animals or artistic imagery. Shape-oriented names such as Starfish, Jellyfish, Sponge, Stick Insect, and Leaf Insect exemplify object-based metaphorization, mapping unfamiliar organisms onto everyday items.

A notable feature of English invertebrate zoonymy is the frequent incorporation of body-part numeration and proportion. Names like Centipede (“hundred feet”), Millipede (“thousand feet”), and Daddy Long-legs foreground specific anatomical traits, often exaggerating them for cognitive salience rather than biological accuracy.

Comparative analysis reveals both convergence and divergence between the two languages. In English, metaphorical naming through resemblance to objects or animals is highly developed and systemically productive, as illustrated by Sea Cucumber and Horseshoe Crab. In Uzbek, such names are often adopted through direct lexical calque, resulting in forms like Dengiz bodringi, rather than emerging from independent metaphorical creativity.

Uzbek shows a higher frequency of simple root words and historically entrenched monolexemic forms (qurt, bit, burga, chayon), whereas English overwhelmingly favors compound formations (earthworm, glowworm, dragonfly). This contrast reflects broader typological tendencies: Uzbek leans toward lexical compactness and terminological stability, while English employs analytic and compositional strategies to encode descriptive detail.

Despite these differences, both languages demonstrate that color and shape are universal cognitive parameters in the categorization of invertebrates. Whether expressed through native roots or compound constructions, visual salience remains the primary basis for distinguishing species across linguistic systems.

The lexical-semantic analysis of invertebrate zoonyms confirms that naming practices are deeply rooted in perceptual experience and cultural-linguistic conventions. English emphasizes metaphorical transparency and descriptive compounding, while Uzbek balances folk terminology with scientific and calqued forms. Together, these patterns illustrate how different languages employ shared cognitive mechanisms yet realize them through distinct structural and semantic strategies.

RESULTS

The results demonstrate that, despite genetic and structural differences between the two languages, the nomination of invertebrates is governed by shared cognitive principles, while their linguistic realization differs substantially.

First, the findings confirm that external appearance constitutes the most productive semantic basis for invertebrate naming in both languages. Color, shape, surface texture, and visually salient body parts function as primary nominative features. In both English and Uzbek, color terms such as black, white, red, yellow, blue/green are systematically employed to differentiate species, particularly those that are dangerous, toxic, or ecologically prominent. This indicates the universality of visual perception as a dominant cognitive mechanism in zoonym formation.

Second, the results show a clear contrast in word-formation strategies. English invertebrate zoonyms predominantly rely on compound and descriptive constructions, especially N+N and Adj+N models (earthworm, jellyfish, sea cucumber, blue-ringed octopus). These constructions allow for high semantic transparency and facilitate fine-grained categorization. Uzbek, by contrast, displays a higher frequency of monolexemic roots and taxonomic category names, including historically established folk terms (qurt, bit, burga, chayon) and internationally standardized scientific designations (nematodalar, trematodalar, mollyuskalar). This difference reflects the more analytical character of English and the more terminological and classificatory orientation of Uzbek invertebrate naming.

Third, the study identifies metaphorical nomination as a highly productive mechanism in English, especially through resemblance to objects or larger animals (starfish, stick insect, leaf insect, horseshoe crab). In Uzbek, metaphor-based names occur less frequently and are often the result of direct calquing from English or international terminology (dengiz yulduzi, dengiz bodringi), rather than independent metaphorical coinage. This suggests that metaphor plays a central creative role in English zoonymy, whereas Uzbek relies more heavily on lexical borrowing and standardization.

Fourth, the results demonstrate that body structure and anatomical features are explicitly encoded in both languages, though with different degrees of transparency. English highlights exaggerated or count-based traits (centipede, millipede, daddy long-legs), while Uzbek more often encodes structural features through generalized descriptors (tikanboshlilar, qalqonli kanalar, ko‘p tukli chuvalchanglar). This indicates different strategies of salience: numerical and figurative emphasis in English versus categorical and morphological emphasis in Uzbek.

Finally, the analysis reveals that scientific taxonomy exerts a stronger influence on Uzbek invertebrate nomenclature than on English vernacular naming. The Uzbek corpus shows extensive use of phylum-, class-, and order-level terms as functional zoonyms, whereas English more clearly separates everyday descriptive names from scientific Latin binomials. As a result, Uzbek invertebrate zoonyms frequently function as educational and classificatory labels, while English zoonyms more often serve descriptive and communicative purposes.

CONCLUSION

In summary, the results demonstrate that invertebrate naming in English and Uzbek is grounded in shared perceptual and cognitive principles, but diverges in structural realization, metaphorical productivity, and degree of terminological standardization. These findings confirm that zoonymic systems are not merely biological labels but linguistically and culturally shaped models of categorization.

REFERENCES

1. Allaby M. Oxford Dictionary of Zoology. – Oxford: Oxford University Press, 1999. – 605 p.
2. Berlin B. Ethnobiological Classification: Principles of Categorization of Plants and Animals in Traditional Societies. – Princeton: Princeton University Press, 1992. – 335 p.
3. Brown C. H. Language and Living Things: Uniformities in Folk Classification and Naming. – New Brunswick: Rutgers University Press, 1984. – 306 p.
4. Lakoff G., Johnson M. Metaphors We Live By. – Chicago: University of Chicago Press, 1980. – 242 p.
5. Lyons J. Semantics: Vol. 1–2. – Cambridge: Cambridge University Press, 1977. – 394 p.
6. Rosch E. Principles of categorization // Cognition and Categorization / Ed. by E. Rosch, B. Lloyd. – Hillsdale: Lawrence Erlbaum Associates, 1978. – P. 27–48.
7. Stern G. Meaning and Change of Meaning. – Göteborg: Wettergren & Kerber, 1931. – 256 p.
8. Trier J. Der deutsche Wortschatz im Sinnbezirk des Verstandes. – Heidelberg: Carl Winter, 1934. – 347 S.
9. Ullmann S. Semantics: An Introduction to the Science of Meaning. – Oxford: Basil Blackwell, 1962. – 278 p.
10. Oxford English Dictionary Online. – Oxford: Oxford University Press. – URL: https://www.oed.com.
11. Harper D. Online Etymology Dictionary. – URL: https://www.etymonline.com.
12. Реформатский А. А. Введение в языкознание. – 5-е изд. – Москва: Просвещение, 1967. – 432 с.
13. Головин Б. Н. Введение в языкознание. – Москва: Высшая школа, 1987. – 319 с.
14. Климов Л. А. Терминоведение. – Москва: Наука, 1989. – 176 с.
15. Hojiyev A. Tilshunoslik terminlarining izohli lug‘ati. – Toshkent: Fan, 2002. – 208 b.
16. Mahmudov N. O‘zbek tilining leksikologiyasi. – Toshkent: Mumtoz so‘z, 2012. – 304 b.
17. Rahmatullayev Sh. Hozirgi o‘zbek adabiy tili. – Toshkent: Universitet, 2006. – 476 b.