20 Common Writing Flaws

1. Burying the Point

The most important information in a paragraph appears at the end—or worse, is never stated explicitly. Readers (and reviewers) skim. If your topic sentence doesn't deliver the point, the paragraph fails.

Before: *Many studies have examined the relationship between temperature and metabolic rate in ectotherms. Smith (2019) found a positive correlation in lizards. Jones (2020) reported similar findings in amphibians. These results collectively suggest that metabolic rate increases with temperature across ectotherms.*

After: *Metabolic rate increases with temperature across ectotherms. This pattern has been documented in lizards (Smith 2019), amphibians (Jones 2020), and insects (Clark 2021), suggesting a conserved physiological response to thermal environment.*

> 💡 **Editing tip:** Write the conclusion first. Then ask: does anything before it actually need to be there?

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2. Hedge Stacking

Using multiple hedging words in a single sentence until the claim is so diluted it says nothing. One hedge is scientific caution; three is cowardice.

Before: *These results may possibly suggest that there could potentially be a relationship between diet and body size.*

After: *These results suggest a relationship between diet and body size.*

> 💡 **Editing tip:** Allow yourself one hedge per claim. Delete the rest.

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3. Passive Voice Overuse

Passive voice isn't always wrong—it's standard in Methods. But when every sentence in the Introduction and Discussion is passive, the writing becomes flat and evasive. The worst symptom: hiding who did what.

Before: *It was found that selection was stronger on males. It has been suggested that this pattern is driven by sexual selection.*

After: *We found stronger selection on males, consistent with the hypothesis that sexual selection drives this pattern (Jones 2020).*

> 💡 **Editing tip:** If you can add "by zombies" after the verb and it still makes grammatical sense, you're using passive voice. Decide if it's intentional.

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4. Nominalizations (Zombie Nouns)

Converting strong verbs into weak nouns, then needing extra verbs to prop up the sentence. “Perform an analysis” instead of “analyze.” “Make an observation” instead of “observe.” This inflates word count while reducing clarity.

Before: *We performed an investigation of the variation in gene expression across tissues.*
After: *We investigated how gene expression varies across tissues.*

> 💡 **Editing tip:** Search your draft for “-tion” and “-ment” endings. For each one, ask whether the original verb would be stronger.

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5. The Literature Review Introduction

Opening paragraphs that mechanically walk through papers (Smith found X, Jones found Y, Lee found Z) without building an argument. An introduction should develop a logical case for why your study exists, not demonstrate that you’ve read papers.

Before: *Smith (2018) studied population genetics of beetles. Jones (2019) examined beetle phylogenetics. Lee (2020) investigated beetle morphology. However, no study has combined all three approaches.*
After: *Understanding beetle diversification requires integrating population genetic, phylogenetic, and morphological data—yet these approaches have largely been pursued in isolation (Smith 2018; Jones 2019; Lee 2020).*

> 💡 **Editing tip:** If you can rearrange the paragraphs in your introduction without losing logic, you don’t have an argument yet.

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6. Starting Sentences with “It” or “There”

Expletive constructions (“It is known that...”, “There are many factors that...”) push the real subject to the middle of the sentence and waste the most prominent position in any sentence—the beginning.

Before: *There are several mechanisms that could explain the observed pattern of divergence.*
After: *Several mechanisms could explain the observed divergence.*

> 💡 **Editing tip:** Search for “It is” and “There are” in your draft. Most can be deleted outright.

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7. Saying “Interestingly” (and Other Empty Editorializing)

Words like “interestingly,” “remarkably,” “importantly,” and “notably” tell the reader how to feel instead of showing them why they should feel that way. If the result is interesting, the sentence should make that self-evident.

Before: *Interestingly, we found that males had higher mutation rates than females.*
After: *Males had mutation rates 1.4× higher than females—a pattern not predicted by the neutral model.*

> 💡 **Editing tip:** Delete the adverb. If the sentence still sounds interesting, it was always unnecessary. If it doesn’t, rewrite the sentence to make the interest explicit.

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8. Failure to Distinguish Results from Interpretation

In the Results section, mixing what you found with what it means. In the Discussion, restating results without interpreting them. Both are structural failures that confuse reviewers.

Before: *(In Results): "Females preferred larger males (p = 0.003), which supports the hypothesis that sexual selection drives size dimorphism."*
After: *(In Results): "Females preferred larger males (t = 3.12, df = 48, p = 0.003; Fig. 2)." (In Discussion): "The strong female preference for larger males (Fig. 2) is consistent with sexual selection driving size dimorphism in this clade."*

> 💡 **Editing tip:** Results should be boring. If a sentence in your Results section excites you, it probably belongs in the Discussion.

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9. Paragraphs That Are Just One Long Sentence (or One Sentence Each)

Both extremes signal a lack of structural awareness. A paragraph should contain 3–6 sentences that develop a single idea. One-sentence paragraphs have no development; run-on paragraphs have no organization.

Before: *N/A — you know it when you see it.*
After: *Each paragraph states one claim (topic sentence), supports it (evidence/reasoning), and connects to the next paragraph (transition).*

> 💡 **Editing tip:** If you can't summarize what a paragraph argues in one sentence, it's doing too much.

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10. Vague Referents ("This," "These," "It" Without a Noun)

Using pronouns that point at the previous sentence but could refer to multiple things. This ambiguity compounds across a manuscript.

Before: *We found elevated mutation rates in males and reduced recombination on the X chromosome. This has important implications for genome evolution.*
After: *We found elevated mutation rates in males and reduced recombination on the X chromosome. This combination of sex-biased mutation and recombination suppression has important implications for genome evolution.*

> 💡 **Editing tip:** Every time you write "this" or "these," follow it with a noun. "This pattern," "This result," "These data."

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11. Confusing "Which" and "That"

"That" introduces restrictive (essential) clauses with no comma. "Which" introduces nonrestrictive (parenthetical) clauses with a comma. Misusing them changes meaning or creates ambiguity.

Before: *The genes which are under positive selection diverge rapidly. [Are all genes under positive selection, or only some?]*

After: *The genes that are under positive selection diverge rapidly. [Only the positively selected ones.] / The genes, which are under positive selection, diverge rapidly. [All of them happen to be.]*

> 💡 **Editing tip:** If you can remove the clause and the sentence still identifies the right noun, use “which” with commas. If the clause is essential to knowing what you mean, use “that” with no comma.

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12. Overlong Sentences

Sentences above ~35 words become difficult to parse, especially when loaded with technical terms. If a sentence requires the reader to hold more than two ideas in working memory, break it up.

Before: *We used a Bayesian phylogenetic approach implemented in BEAST2 with a relaxed uncorrelated lognormal clock model and a Yule speciation prior to estimate divergence times among all sampled taxa in our dataset, which included 247 species from across the family.*

After: *We estimated divergence times using a Bayesian phylogenetic approach in BEAST2, applying a relaxed lognormal clock and a Yule speciation prior. Our dataset included 247 species spanning the family.*

> 💡 **Editing tip:** Read your sentence aloud. If you run out of breath, split it.

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13. Misplaced Modifiers

Descriptive phrases that attach to the wrong noun, often creating unintentionally absurd meanings. Extremely common in scientific writing because sentences are complex.

Before: *Using a molecular clock, the divergence between the two lineages was estimated at 12 Mya. [The divergence used a molecular clock?]*

After: *Using a molecular clock, we estimated the divergence between the two lineages at 12 Mya.*

> 💡 **Editing tip:** The subject immediately after a modifying phrase should be the thing doing the action in that phrase.

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14. Data Is/Data Are Confusion (and Other Agreement Errors)

In scientific writing, “data” is traditionally plural (“these data show”). More importantly, subject-verb agreement errors with collective nouns, compound subjects, and prepositional phrases are pervasive and signal carelessness to reviewers.

Before: *The distribution of allele frequencies were consistent with drift.*

After: *The distribution of allele frequencies was consistent with drift. [Subject is “distribution,” singular.]*

> 💡 **Editing tip:** Find the true subject by removing prepositional phrases. “The distribution [of allele frequencies] was...”

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15. Failing to Frame the Gap

The single most important move in a scientific introduction is identifying the gap your study fills. Many drafts summarize the field without ever explicitly stating what is unknown or unresolved.

Before: *Many studies have examined sex chromosome evolution. Here, we investigate sex chromosome evolution in beetles.*

After: *Although sex chromosome turnover rates vary dramatically across vertebrates (Bachtrog 2014), the mechanisms maintaining ancestral sex chromosomes for hundreds of millions of years remain unknown. We test whether sexually antagonistic selection stabilizes sex chromosomes in beetles, a clade with exceptional karyotypic diversity.*

> 💡 **Editing tip:** Your introduction should build to a sentence that starts with a word like "however," "yet," or "despite." That's your gap.

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16. The "We Performed" Methods Section

Writing the Methods as a narrative of what you did in chronological order, rather than organizing by analytical category. Reviewers need to find specific details quickly; chronology makes that impossible.

Before: *First, we collected samples. Then we extracted DNA. Next, we amplified the target locus. After that, we sequenced the amplicons. We then aligned the sequences...*

After: *Organize under subheadings: Study System, Sampling, DNA Extraction and Sequencing, Sequence Alignment and Phylogenetic Analysis, Statistical Analyses. Each section is self-contained.*

> 💡 **Editing tip:** Methods should be organized so a reader can find any specific detail in under 30 seconds.

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17. Over-Citing

Attaching five or more citations to a single uncontroversial claim. Parenthetical pileups signal insecurity, not thoroughness. Cite comprehensively for contested claims; cite one or two key references for established facts.

Before: *Body size is an important life history trait (Smith 2001; Jones 2003; Lee 2005; Brown 2008; Clark 2010; Adams 2012; White 2015; Green 2018).*

After: *Body size is a central life history trait (reviewed in Smith 2015).*

> 💡 **Editing tip:** If a claim needs more than three citations, consider citing a review instead.

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18. Tense Inconsistency

Randomly switching between past and present tense within and across sections. Convention: past tense for what you and others did (Methods, specific Results); present tense for established knowledge and generalizations (Introduction, Discussion interpretation).

Before: *We find that males are larger (Fig. 1). This result was consistent with sexual selection. Smith (2019) reports a similar pattern.*

After: *We found that males were larger (Fig. 1). This result is consistent with sexual selection. Smith (2019) reported a similar pattern in a related species.*

> 💡 **Editing tip:** Pick the convention for each section and enforce it in a dedicated editing pass.

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19. Weak Transitions Between Paragraphs

Paragraphs that start without any connection to the previous one. The reader experiences the manuscript as a series of disconnected observations rather than a developing argument.

Before: *[End of paragraph about mutation rates.] Body size varies across the clade. [No connection to the previous topic.]*

After: *[End of paragraph about mutation rates.] If elevated mutation rates accelerate phenotypic divergence, body size, the trait most strongly correlated with fitness in this clade, should show corresponding variation.*

> 💡 **Editing tip:** The first sentence of each paragraph should answer: "Why am I reading this after what I just read?"

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20. Not Revising for Concision

Submitting a first draft that was never edited for economy. Almost every first draft can be cut by 15–20% without losing content. Common bloat: redundant phrases ("in order to" → "to"), unnecessary preambles ("It is worth mentioning that"), and doubled adjectives.

Before: *In order to investigate whether or not there was a significant difference between the two groups in terms of their overall body size, we performed a statistical analysis using a t-test.*

After: *We compared body size between groups using a t-test.*

> 💡 **Editing tip:** After finishing a draft, challenge yourself to cut 20% of the words. You'll almost always improve it.

A Final Note on AI and Revision

AI tools can identify many of these flaws automatically, hedge stacking, passive voice, nominalizations, and overlong sentences are all pattern-matchable. Use them for that. But AI is unreliable at the architectural flaws: burying the point, failing to frame the gap, weak transitions, and the distinction between results and interpretation. Those require a writer who understands what the paper is actually arguing. That's you.

The goal is not to write like an AI. The goal is to write better than one, and to know when it can help you get there faster.