

Bahan Ajar: Plagiarism

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Metode Ilmiah (SKS: 2)



Now.... Mempublikasikan hasil penelitian pada jurnal ilmiah

- **Jurnal ilmiah pada umumnya adalah sebuah publikasi periodik berupa karya tulis artikel ilmiah yang diterbitkan secara berkala.**

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Ini berbeda dengan majalah biasa

Format atau susunan untuk jurnal ilmiah pada umumnya terdiri dari:

1. Judul
2. Abstrak
3. Pendahuluan
4. Bahan dan Metode
5. Hasil
6. Pembahasan
7. Kesimpulan
8. Daftar Pustaka

Tipe-tipe artikel jurnal

1. Original Research/research paper

This is the most common type of journal manuscript used to publish full reports of data from research.

It may be called an *Original Article*, *Research Article*, *Research*, or just *Article*, depending on the journal.

Tipe-tipe artikel jurnal

2. Short reports/communication:

These papers communicate brief reports of data from original research that editors believe will be interesting to many researchers, and that will likely stimulate further research in the field.

As they are relatively short the format is useful for scientists with results that are time sensitive (for example, those in highly competitive or quickly-changing disciplines).

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SHORT COMMUNICATION

WILEY

Can fish lifts aid upstream dispersal of the invasive red swamp crayfish (*Procambarus clarkii*) past high-head hydropower plants?

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Abstract

Many types of fish passage facilities have been built worldwide to mitigate river fragmentation by instream barriers and partially restore upstream movements of fish. Among these, fish lifts are a design that enables fish to pass through high-head obstacles (>15 m height) and can be considered the most cost-effective fishway. However, fishways may also be used by non-native invasive species to disperse and impact new areas and organisms upstream. As far as the authors are aware, this short communication is the first record of the red swamp crayfish (*Procambarus clarkii*) passing through a fish lift. The lift, built at the Touvedo hydropower plant on the Lima River (northwestern Portugal), was mainly designed for the upstream passage of diadromous fish. Fish-lift use and upstream passage of two crayfish occurred over 2 years (November 2017–October 2020) during periods of turbine shutdown and high water temperatures (18°C). In the present case, the crayfish passage should not pose a serious threat due to the limiting characteristics of the upstream lotic environment. Nevertheless, despite the small sample size, this study shows the importance of considering the passage of invasive crayfish species while planning future fishways and the need to continuously monitor such facilities to detect the passage of this and other non-native invasive species.

KEYWORDS

crayfish, dams, fish passage, hydropeaking, invasive species, video-monitoring

1 | INTRODUCTION

Invasion by non-native species currently stands out as one of the main threats to biodiversity, leading to severe decline or extinction of native species. The result can be ecosystem homogenization, particularly in freshwater ecosystems, with invader impact causing annual losses of billions of euros and dollars (Cuthbert et al., 2021). Despite the increase in the number of non-native species that is annually reported to occur in river basins (Oficialdegui et al., 2019), only a small proportion establish self-sustaining populations, spread to new environments, and negatively interact with native species causing biodiversity and ecosystem service losses (Twardochleb,

Olden, & Larson, 2013). However, this small proportion can become invasive.

This situation has occurred in the case of the red swamp crayfish (*Procambarus clarkii*), a successful invader worldwide (Oficialdegui et al., 2019). The species, native to North America, was introduced in Europe in the 1970s because of its high economic importance and food value. Its first occurrence in Portugal dates back to 1979 (Moreira et al., 2015), expanding thereafter from southeastern to northwestern river basins due to natural and anthropogenic dispersion. The impacts of the red swamp crayfish on other species and ecosystems have been detailed in the literature over the past decade and include decline and local extinctions of native crayfish, fish,

REVIEW

Release of treated effluent into streams: A global review of ecological impacts with a consideration of its potential use for environmental flows

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Abstract

1. Worldwide, the addition of treated wastewater (i.e. effluent) to streams is becoming more common as urban populations grow and developing countries increase their use of wastewater treatment plants. Release of treated effluent can impair water quality and ecological communities, but also could help restore flow and maintain aquatic habitat in water-stressed regions. To assess this range of potential outcomes, we conducted a global review of studies from effluent-fed streams to examine the impacts of effluent on water quality and aquatic and riparian biota.
2. We identified 147 quantitative studies of effluent-fed streams, most of which were from the U.S.A. and Europe. Over 85% of the studies identified water quality as a primary study focus, including basic physical and chemical parameters, as well as trace organic contaminants. Nearly 60% of the studies had at least some focus on aquatic or riparian biota, primarily fish, aquatic invertebrates, and basal resources (e.g. algae).
3. Effluent inputs generally impaired water quality near discharge points, mainly through increased water temperature, nutrients, and concentrations of trace organic contaminants, but also via decreased dissolved oxygen levels. The majority of ecological studies found that basal resources, aquatic invertebrates, and fish were negatively affected in a variety of ways (e.g. biodiversity losses, replacement of sensitive with tolerant species). However, several studies showed the importance of effluent in providing environmental flows to streams that had been dewatered by anthropogenic water withdrawals, especially in semi-arid and arid regions.
4. Knowledge gaps identified include the abiotic impacts of effluent, such as changes in channel morphology and hydrology (e.g. how nutrient-rich and warmer effluent affects infiltration rates or interactions with groundwater), the effects of effluent on plants and vertebrates (e.g. amphibians, birds), and the impact of effluent-induced perennialisation on naturally intermittent or ephemeral streams.
5. Although effluent-fed streams often exhibit signs of ecological impairment, there is great potential for these systems to serve as refuges of aquatic biodiversity.

Tipe-tipe artikel jurnal

3. Review Articles:

Review Articles provide a comprehensive summary of research on a certain topic.

They are often (**not always**) written by leaders in a particular discipline after invitation from the editors of a journal.

Reviews commonly cite approximately 100 primary research articles.

Contoh:

<https://onlinelibrary.wiley.com/doi/full/10.1111/fwb.13519>

Tipe-tipe artikel jurnal

4. Case Studies:

These articles report specific instances of interesting phenomena.

A goal of Case Studies is to make other researchers aware of the possibility that a specific phenomenon might occur.

This type of study is often used in medicine to report the occurrence of previously unknown or emerging pathologies.

Tipe-tipe artikel jurnal

5. Methodologies or Methods

These articles present a new experimental method, test or procedure.

The method described may either be completely new, or may offer a better version of an existing method.

<https://www.mdpi.com/2073-4441/13/10/1409/html>

Performance of a Handheld Chlorophyll-*a* Fluorometer: Potential Use for Rapid Algae Monitoring

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Abstract: Chlorophyll-*a* measurements are an important factor in the water quality monitoring of surface waters, especially for determining the trophic status and ecosystem management. However, a collection of field samples for extractive analysis is time-consuming and expensive. Handheld fluorometers that can perform in waters with a variety of water conditions. We tested a handheld fluorometer for sensitivity findings with EPA Method 445.0 using water from Arizona, USA. Our results suggested that the handheld fluorometer can be used in waters with low chlorophyll-*a* concentrations (<20 µg/L). However, the performance was lower when turbidity levels were >30 NTU. To account for this, we recommend the use of a handheld fluorometer when field water bodies.

Keywords: water quality; turbidity; ecosystem

1. Introduction

In many water bodies, excess nutrients of primary producers (e.g., phytoplankton) directly reduce the aquatic biodiversity (controlled successfully with regular water remediation measures [5]). Algal monitoring and public health risks and should be considered.

The accurate measurement of chlorophyll-*a* concentration in water bodies. The EPA has standards for measuring algae chlorophyll-*a* concentration to estimate phytoplankton biomass [6]. The accurate measurement of chlorophyll-*a* is time-consuming a field of field-collected samples [8]. An in-situ chlorophyll-*a* was proposed in the mid-1970s, never gained widespread use. This methodology of handheld probes have been developed in the last few decades. These handheld probes are equipped with integrated turbidity



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samples from two urban, manmade lakes in Tucson, Arizona, USA (Figure 2). Lakeside Lake (5.7-hectare surface area at 32°11'10.1" N 110°48'58.8" W) and Silverbell Lake (5.3-hectare surface area at 32°12'05.0" N 111°01'55.0" W) both receive moderate recreational and fishing use and are fed by groundwater pumped to the surface via wells. The well that supports Silverbell Lake is influenced by treated wastewater recharge in the nearby effluent-dependent Santa Cruz River [2], and Lakeside Lake also receives episodic runoff from Atherton Wash, an ephemeral urban stream.



Figure 1. (A) Fluorometer handheld fluorometer and (B) TD-701 fluorometer.



Figure 2. Water samples for the analysis were collected from Lakeside Lake (A) and Silverbell Lake (B) in Tucson, Arizona (USA).

In each lake, we collected a 15-L composite water sample on 5 October 2019. Each composite sample consisted of five 3-L grabs collected from different portions of the lake accessible from the shore. The composite samples were contained into a 5-gallon plastic water container, transported to the laboratory at the University of Arizona, and analyzed within 24 h. In the laboratory, each composite water sample was transferred into a 1-L beaker, and homogenized using a mixing bucket. One liter of homogenized water from each lake was used for taxonomic analysis of the algae. This taxonomic subsample was then transferred to a 1-L glass beaker and stirred with a magnetic stir bar for 1 min prior to pipetting out 1 mL of the sample. The phytoplankton samples were read using an Olympus BX62 phase-contrast microscope and Sedgewick-Rafter (S-R) counting chamber [2]. The S-R cell was 10 cm². Both strip and field counts were performed and units/cm³ calculated [2].

We tested the performance of the Fluorometer probe on water from both lakes at three different algal concentrations, under light and dark conditions, and under four different

Langkah-langkah

- Tentukan jurnal yang akan dituju
- Siapkan “manuskrip” – sesuai standar jurnal
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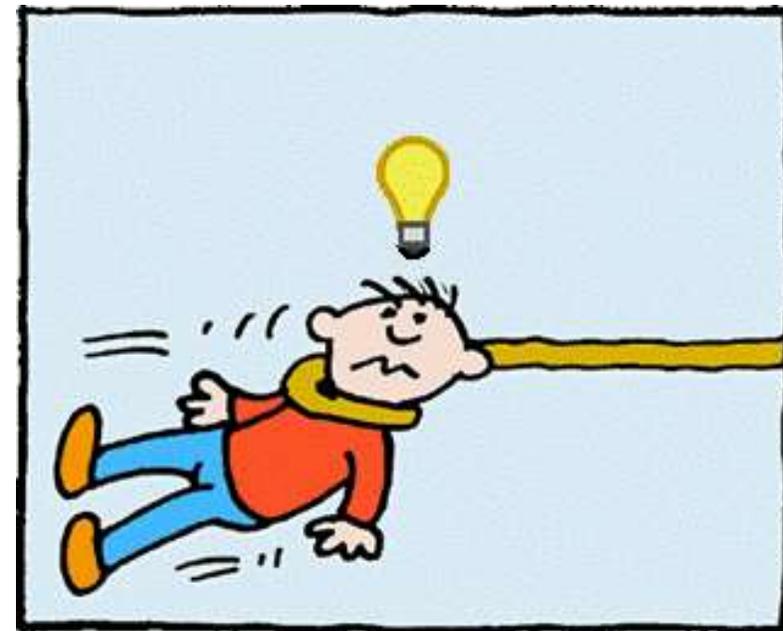
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- Penulisan kata, tanda baca
- Akan lebih baik dalam tim (untuk review sebelum submit)

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Now.... Mengindari Plagiarism

Plagiarism is using someone else's words, art, data, or ideas and passing them off as your own. Cutting and pasting is so easy that many people plagiarize without meaning to.

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You Might Be Plagiarizing If You...

- **Submit** someone else's work as your own.
- **Cut and paste** together phrases, ideas, and sentences from a variety of sources to write an essay
- **Copy words, art, or data from someone else's work**--published or unpublished--without giving the original author credit.

Self-Plagiarism

- **Self-plagiarism** happens when you submit your own paper in more than one course without permission of the instructors.
- **How is this plagiarism?** An important part of academic honesty. Don't cheat yourself.



Bagaimana menghindari plagiarisme

1. Quoting

When you quote someone's **exact words** in your paper, put their words in **quotation marks** and tell your reader who said or wrote the words by citing the author.

"We must learn to live together as brothers or perish together as fools" (King, 1964).

or

As Dr. Martin L. King, Jr. said, "We must learn to live together as brothers or perish together as fools" (1964).



Bagaimana menghindari plagiarism



2. Paraphrasing

- Direct quotes are pretty easy to understand. Paraphrasing is more challenging.
- Even when you are using your own words, the *ideas* are still taken from someone else and must be cited.

How to Paraphrase

Paraphrasing is not simply rearranging or rewording an original passage. Correct paraphrasing consists of:

1. **Reading** the original passage,
2. **Understanding** what the original author is saying,
3. **Synthesizing** (putting together) the information,
4. **Expressing** your understanding of these ideas in your own words and then
5. **Citing** the original author.

Paraphrasing Sentences

- *Original:* Giraffes like Acacia leaves and hay, and they can consume 75 pounds of food a day.
Paraphrase: A giraffe can eat up to 75 pounds of Acacia leaves and hay daily.
- *Original:* Symptoms of influenza include fever and nasal congestion.
Paraphrase: A stuffy nose and elevated temperature are signs you may have the flu.

What About Charts and Graphs?

- Someone else's charts, graphs, statistics, graphics, or any kind of media have to be cited just like someone else's words. If you didn't create it, you need to show who did.



Bagaimana menghindari plagiarism

3. Citing

You can avoid plagiarizing by...

- Citing the author when you use **direct quotes**.
- Citing the author when you **paraphrase** her words or ideas.
- Citing the author when you use his **statistics, charts, graphs, media, or drawings**.



Apakah semua hal harus disitasi (cited)?

What Doesn't Need to Be Cited?

- **Common knowledge** does not need to be cited. Common knowledge includes facts that are known by a lot of people and can be found in many sources. For example, you do not need to cite the following:

Bapak Ir. Sukarno adalah presiden RI pertama

Samarinda adalah ibukota Provinsi Kalimantan Timur

Air mengalir dari tempat yang tinggi ke tempat yang rendah



- **Your own work.** If it's your words, your opinion, your photo, or your graph, of course, you don't need to cite it.

Common Citation Methods

- **APA:** American Psychological Association. Frequently used in the sciences and social sciences. Consult the *Publication Manual of the American Psychological Association*.
- **MLA:** Modern Language Association. Frequently used in the humanities, literature, and arts. Consult the *MLA Handbook for Writers of Research Papers* (for undergraduates) or *MLA Style Manual and Guide to Scholarly Publishing* (for grad students).
- **Turabian:** Multidisciplinary; frequently used in history. Consult *A Manual for Writers of Term Papers, Theses, and Dissertations* by Kate Turabian.
- **Chicago:** Multidisciplinary; frequently used in history. Consult the *Chicago Manual of Style*.
- **AMA:** American Medical Association. Frequently used in health, medicine and biology. Consult the *American Medical Association Manual of Style*.

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Release of treated effluent into streams: A global review with a consideration of its potential use for environmental flows

[H Hamdhani](#), [DE Eppehimer](#), [MT Bogan](#) - *Freshwater Biology*
Worldwide, the addition of treated wastewater (ie effluent) to streams is as common as urban populations grow and developing countries wastewater treatment plants. Release of treated effluent can impact

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- MLA Hamdhani, Hamdhani, Drew E. Eppehimer, and Michael T. Bogan. "Release of treated effluent into streams: A global review of ecological impacts with a consideration of its potential use for environmental flows." *Freshwater Biology* 65.9 (2020): 1657-1670.
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- Vancouver Hamdhani H, Eppehimer DE, Bogan MT. Release of treated effluent into streams: A global review of ecological impacts with a consideration of its potential use for environmental flows. *Freshwater Biology*. 2020 Sep;65(9):1657-70.



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Consequences of Plagiarism

- **Failing an assignment**
- **Receiving a lower course grade**
- **Failing a course**
- **Getting expelled**

So Remember...

- **Give credit where credit is due.**

Don't use words, ideas, or anything else in your paper that was created by someone else without giving them credit.

- **Know your citation style guide.**

Whether it's MLA, APA, or any other citation method, learn how to use it well.

Referensi

- <https://libguides.sjsu.edu/plagiarism/home-page>