Dinosaur Footprints

Throughout history, dinosaur finds have made huge discoveries within their diverse taxonomies and how they relate to common ancestral species ~~Throughout history dinosaur discoveries have made huge finds with the classifications of taxonomies of different types of dinosaur and how they relate to common ancestral species.~~ Paleontologists ~~look at~~ examine fossils to see where they ~~come~~ originated from and try to connect them to current species with similar characteristics. ~~and try to connect similar characteristics with species now~~. Scientists have been studying dinosaur fossils and finding discoveries for many years now, and are still doing so. Dinosaurs in studies ~~has~~ have been helpful for the evolution of other species that have developed from a specific type of dinosaur or ancestral species. ~~and developed from some type of dinosaur or ancestral species~~. Birds, from the discovery of scientists, are said to be descendants of dinosaurs. ~~Can you believe that?~~ How is that possible? Birds are derived from small-sized Theropods (Zhou p. R751). ~~Its~~ It is ~~ah-mazing~~ amazing what paleontologists have discovered from the fossils of these feathered dinosaurs. A new perspective on dinosaur fossils has led to the discovery of the origin of feathers, and the many diverse characteristics of birds. ~~A new perspective on dinosaur fossils discovers the origin of feathers and the characteristics for the diversity of birds.~~

After nearly one and a half ~~century~~ centuries of ~~study~~ studying and ~~debate~~ debating on whether extant birds are descendants of dinosaurs, paleontologists finally agree that they are (Zhou p. R751). The origin of birds was first thought to come from the Archaeopteryx dinosaur. The Archaeopteryx fossil had features similar to birds, such as feathers, wings, retained sharp claws on the hands, long bony tail, and other reptilian

characteristics ~~The Archaeopteryx fossil had bird similarity features such as feathers, wings, retained sharp claws on the hands, long bony tail, and other reptilian characteristics.~~ Scientists that discovered these findings had different ideas about which dinosaur was similar to the birds. By the late 1990s, the debate about the link between dinosaurs and birds ~~the debate about the dinosaur bird link~~ was over. ~~and the~~The discovery of the fossils from thousands of bona fide dinosaurs, covered in feathers, provided the most definitive visual evidence for the link between dinosaurs and birds"~~the dinosaur bird link~~ (Brusatte p. R889).

Birds are ~~nested~~ found within the theropod dinosaurs but are also ~~have~~ found within major subgroups of mostly carnivorous species, ~~that~~ which ~~that~~ include: the behemonths, ~~Tyrannosaurus and~~Tyrannosaurus, and Allosaurus (Brusatte p. R889). The Velociraptor, Deinonychus, and Troodon are also a much more bird-like species because they are smaller and obvious (obvious? Why?). The theropods subgroups that birds are members of is: Coelurosauria, Maniraptora, and Paraves (Brusastte p. R889). The dromaeosaurids and troodontids are the closest ~~relative~~ relatives with their small-bodied, feathered, and large-brained (what exactly?). The fossils of the dromaeosaurids and troodontids make it clear that the ~~anatomically~~ anatomical similarities, to the earliest birds, makes it very ~~hard~~ difficult to tell them apart. The birds first appeared in the fossil record during the Middle-Late Jurassic around 165-150 million years ago. ~~and the~~The oldest birds, and their closest relatives, were small, lightweight, long-armed, winged, and feathered animals (Brusatte p. R889). There were latter (did you mean later?) birds that were put into two major groups, the Enantiornithes and Ornithuromorpha, to form the clade Ornithoraces (Brusatte p. R890). This clade had a keeled sternum, ~~elongate~~

elongated coracoid, narrow furcula (wishbone), and reduced ~~hand~~ hands with modifications to the flight apparatus. Examples of these Cretaceous birds were the Gansus, Patagopteryx, Yixianomis, and Apsaravis. There are so many subgroups and groups of ~~dinosaur bird involvement~~ dinosaur and bird relations.

Dinosaurs have diverse types of simple and complex feathers that have been widespread throughout many nonavian dinosaur lineages (Persons p.857). Different functions of feathers in certain dinosaur, like the theropods, were a key to understanding the evolution and origin of birds, and the flight of them ~~too~~ as well. The different types of feathers ~~where~~ were protofeathers, pennaceous feathers, long feathers, and other ~~ones~~ feather varieties that helped dinosaurs fly ~~better~~ more proficiently or other ~~things~~ functions. Pennacceous feathers first appeared as fans on a distal tail~~s~~ and small protowings, with symmetrically vaned feathers on the distal forelimb (Heers p.459). The Archaeopteryx consists of bilaterally symmetrical pennaceous feathers possessing long, thin, and slightly curved rhanchides with regularly oriented barbs, forming narrow vanes (Forth p.79). The feathers covered all over the body, but all in different sizes. ~~all over the body.~~

**Review:**

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**1st Paragraph:**

"**Throughout history dinosaur discoveries have made huge finds with the classifications of taxonomies of different types of dinosaur and how they relate to common ancestral species."** -This sounds like a run on sentence, and doesn't make too much sense. Also, there should be a comma after **"Throughout history." Classifications and taxonomies are basically the same thing**, so one of those words could be omitted. Instead of saying "different types", you could say "diverse" It should be revised, and along the lines of something like this: **"Throughout history, dinosaur finds have made huge discoveries within their diverse taxonomies and how they relate to common ancestral species."**

Instead of saying **"Paleontologists look at fossils",** you could say they **examine** them instead. For **"where they come from"** you could say where they **originated** from. For **"and try to connect similar characteristics with species now."** You could say, "**and try to connect them to current species with similar characteristics.**"

For, **"Scientists have been studying dinosaur fossils and finding discoveries for many years now and still doing so" you could add a comma after "now" and add "are" after the and in "and still doing so."**

For **"Dinosaurs in studies has been helpful for the evolution of other species and developed from some type of dinosaur or ancestral species."** Say **"have been"** instead of **"has been" and for the part "and developed from some type of dinosaur or ancestral species"** you could say **"that have developed from a specific type of dinosaur or ancestral species."**

For **"Birds from the discovery of scientists are said to be descendants of dinosaurs"** there should be a comma after birds and a comma after scientists.

Instead of saying, **"can you believe that?"** you can say, "how is that possible?" to make it sound more formal

For the sentence, "**Its ah-mazing what paleontologists have discovered from the fossils of these feathered dinosaurs**." Use the contraction, "It's" or say "It is" instead of "its". Also, it is better to just use "amazing" instead of "ah-mazing." Sounds more "proper" that way.

For the sentence, **"A new perspective on dinosaur fossils discovers the origin of feathers and the characteristics for the diversity of birds."** Slightly doesn't make sense. It could go like this: **"A new perspective on dinosaur fossils has led to the discovery of the origin of feathers, and the many diverse characteristics of birds."**

**2nd Paragraph:**

**"After nearly one and half century of study and debate on whether extant birds are descendants of dinosaur, paleontologists finally agree"** sounds incomplete because of the last part, although it is obvious what you are implying. Still, you could add "that they are" ("they" referring to the birds) to the end of that sentence. Also, there should be an

"a" in front of "half." "Century" should be changed to "centuries" and "study" and debate" should be changed to "studying" and "debating."

For **"The origin of birds was first thought to come from Archaeopteryx dinosaur", "the"** could be in front of Archaeopteryx to show readers that you are talking about one specific dinosaur.

For **"The Archaeopteryx fossil had bird similarity features such as feathers, wings, retained sharp claws on the hands, long bony tail, and other reptilian characteristics."** Instead of saying "bird similarity features, you could switch that around a bit like this: "The Archaeopteryx fossil **had features similar to birds,** such as feathers, wings, retained sharp claws on the hands, long bony tail, and other reptilian characteristics."

For "**By the late 1990s the debate about the dinosaur bird link was over and the discovery of the fossils from thousands of bona fide dinosaurs covered in feathers provided the most definitive visual evidence for the dinosaur-bird link"** there should be a comma after 1900s. Also, you could say "the debate about the link between dinosaurs and birds" instead of "the debate about the dinosaur bird link." For the second half of that sentence, there should be commas after 'dinosaurs" and "feathers." I think this could be split into two sentences instead of one.

**3rd Paragraph:**

For the first sentence, **"Birds are nested within the theropod dinosaurs but also have major subgroups of mostly carnivorous species that that include the behemonths Tyrannosaurus and Allosaurus"** The structure of this sentence should be polished a bit more, plus it is missing a few commas. Birds are found within the Theropod subgroup

For this sentence, **"The Velociraptor, Deinonychus, and Troodon are also much more bird-like species because they are smaller and obvious"** could be polished as well. I'm not sure what you mean by "obvious."

In this sentence, **"The theropods subgroups that birds are members of is Coelurosauria, Maniraptora, and Paraves"** you should put a colon after "is."

This sentence, **"The dromaeosaurids and troodontids are closest relative with their small-bodied, feathered, and large-brained."** Sounds incomplete. Large-brained what exactly? Or did you mean to say "brains" instead? Also, "the" could be in front of "closest" and "relative" should be changed to "relatives."

In this sentence, **"The fossils of the dromaeosaurids and troodontids make it clear that the anatomically similarities to the earliest birds makes it very hard to tell them apart."** "anatomically" should be changed to "anatomical." Instead of saying "hard you could say "difficult." Also, you could add commas before "to" and after "birds."

This sentence, **"The birds first appeared in the fossil record during the Middle-Late Jurassic around 165-150 million years ago and the oldest birds and their closest relatives were small, lightweight, longarmed, winged, and feathered animals"** could be split into two sentences instead of one because it sounds like a run-on. Also, there there should be a hyphen btween "longarmed."

In this sentence, **"There were latter birds that were put into two major groups the Enantiornithes and Ornithuromorpha to form the clade Ornithoraces"** did you mean to say "later" or did you really mean "latter?" There should be a comma after "groups" and after "Ornithuromorpha"

In this sentence, **"This clade had a keeled sternum, elongate coracoid, narrow furcula (wishbone), and reduced hand with modifications to the flight apparatus."** "elongate" should be changed to "elongated" and "hand" should be changed to "hands"

In this sentence, **"There are so many subgroups and groups of dinosaur bird involvement."** The "dinosaur bird involvement" part could be changed

**4th Paragraph:**

In this sentence**, "Different functions of feathers in certain dinosaur like the theropods were a key to understanding the evolution and origin of birds and the flight of them too."** You could say dinosaurs instead of dinosaur or add "species" after dinosaur. Also, instead of "too" you could say "as well" or change the last part of that sentence.

In this sentence: **"The different types of feathers where protofeathers, pennaceous feathers, long feathers, and other ones that helped dinosaurs fly better or other things."** It should be "were" instead of "where." Instead of saying "other ones" you could say "other varieties" and instead of saying "other things" you could say "other functions." Also "fly better" could be changed.

In this sentence, **"Pennacceous feathers first appeared as fans on a distal tails and small protowings with symmetrically vaned feathers on the distal forelimb"** the "s" should be removed from "tails."

In this sentence, **"The feathers covered all over the body but all in different sizes all over the body."** You are repeating yourself. Omit the second "all over the body" and end it at "different sizes"

Overall, the structure of your paper is in good condition (defined paragraphs, cited references) and your topic (as apparent in your introduction paragraph) is very interesting and well thought-out. The only problem is minute grammatical errors involved with syntax and verbiage. Just correct those, and modify some of your wording, and your term paper should be great! I believe once you add your abstract and discussion portion your

paper should level out. However, if not, you could add another paragraph or two. I say that because reading the last paragraph seems like you have more to say after that (the more, the better!). Also, don't forget the title page! If you don't want to manually create one MS Word has some templates with pre-made title pages you could use (I used the "student report with cover photo" one).

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