



# Angling, Birding and Butterfly Watching are new emerging areas of Adventure Tourism in Pithoragarh District

1<sup>st</sup> Author ,Sumit Kumar ,Research Scholar, Geography Department

Laxman Singh Mahar Govt. Post Graduate College Pithoragarh, 262501(Uttarakhand)

2<sup>nd</sup> Author, Associate Professor Dr. Pankaj kumar Bhatt (Research Guide )

Laxman Singh Mahar Govt. Post Graduate College Pithoragarh, 262501(Uttarakhand)

**Abstract:** This study investigates how fishing, bird watching, and butterfly spotting could develop into sustainable adventure tourism in Pithoragarh district, Uttarakhand, India. Located in the Kumaon Himalayas, the area boasts diverse wildlife and sightseeing options that attract eco-minded travelers. Field surveys show more than twenty birds- including the Himalayan Monal, Bearded Vulture, and Verditer Flycatcher- and nineteen butterflies, such as Apollo, Commander, and Orange Oak Leaf. Anglers are increasingly drawn to the Kali and Gori rivers, noted for Brown Trout and Golden Mahseer. To assess these trends, the authors combined field notes, interviews with tourists and residents, and review of existing reports. Results show rising visitor interest in nature-centred recreation and underscore the potential for local jobs and income through eco-tourism. Still, weak transport links, little accommodation, and few trained guides limit growth. Resources recommend joined-up planning, habitat protection, and active community involvement to advance these low-impact tourism ideas.

**Keywords:** Pithoragarh, Adventure Tourism, Birding, Butterfly Watching, Angling, Biodiversity, Ecotourism.

## 1. Introduction

Over the last thirty years, adventure tourism has broadened its scope, moving away from solely high-risk pursuits-such as mountaineering and white-water rafting-and embracing gentler, nature-centered activities like bird watching, butterfly watching, and fishing. These lower-impact outings not only satisfy the wanderlust of visitors but also double as tools for environmental education, conservation advocacy, and the development of sustainable local incomes, particularly in biologically sensitive areas. India, with its extraordinary range of flora, fauna, and landscapes, has therefore seen a surge in nature-oriented travel, most visibly in Himalayan states such as Uttarakhand (Vyas, N., Kumari, B., & Sharma, P. 2024). Recognising this trend, the countrys Ministry of Tourism has marked adventure tourism as a cornerstone of its sustainable development strategy. Revered as the Land of the Gods, Uttarakhand is quickly becoming a leading destination for eco-adventure,

drawing visitors with its unspoiled forests, rushing rivers, and diverse wildlife (Kishnani, 2019). Although trekking, camping, and white-water rafting still dominate the itinerary, quieter pursuits such as birding, angling, and butterfly watching are steadily rising in popularity as travellers seek deeper, more responsible connections with the natural world (Tiwari, P. C., Pant, D., Nainwal, P., Kweera, M., & Kumar, R. 2021).

Positioned at the northeastern extremity of Uttarakhand, Pithoragarh district adjoins both Nepal and the Tibetan border. Falling within the Kumaon belt, the area boasts a varied ecology that includes alpine meadows, glacial streams, and secluded valleys (Verma, A., & Arya, M. K. 2020). High-altitude woods, sacred groves, and protected zones like Askot Wildlife Sanctuary dwell here, offering a strong foundation for biodiversity-centered adventure tourism (Pullaiah, 2018). Even so, numerous activities tied to this theme are still little known and receive scant promotion.

## 2. Significance of the Study

Scholarship on non-mainstream adventure activities such as bird watching, butterfly viewing, and angling and their contribution to sustainable tourism in the Himalayas remains sparse. The present study seeks to fill this void by documenting emerging trends and assessing the untapped potential of these eco-tourism segments in Pithoragarh District. Rising reports of diverse bird and butterfly species, coupled with angling opportunities along the Kali and Gori Ganga Rivers, suggest an expanding niche capable of drawing nature enthusiasts while generating conservation-linked livelihoods for local residents.

## 3. Objectives of the Study

The present study is guided by the following objectives:

- To assess the diversity of bird, butterfly, and fish species in Pithoragarh district.
- To examine the emerging trend of birding, butterfly watching, and angling as adventure tourism activities.
- To evaluate the impact of these activities on local economy, community involvement, and biodiversity conservation.

## 4. Research Questions

- What are the key bird, butterfly, and fish species attracting tourists in Pithoragarh?
- What is the current status and growth of birding, butterfly watching, and angling in the region?
- How do these forms of tourism affect local communities socially and economically?
- What measures are needed to promote these forms of tourism sustainably?

## 5. Study Area Profile: Pithoragarh District

Often dubbed Little Kashmir, Pithoragarh lies in the eastern fringe of Uttarakhand's Kumaon division and serves as the state's gateway to high Himalayan transits. Its proximity to the Tibetan border and to Nepal's Seti River corridor renders the district both strategically and ecologically delicate. Covering roughly 7,100 square kilometres, its relief shifts from verdant mid-hill valleys to the permanent ice of the Kumaon main range. Elevations vary between 1,500 and above 6,000 metres, facilitating distinct subtropical, temperate, and alpine biomes that shelter several endemics. Principal rivers Kali (or Sharda), Gori Ganga, and Saryu carve deep gorges and disperse sediment that undergirds terrace agriculture while nourishing trout and diverse invertebrate communities. Iconic glaciers, including Milam and Namik, feed glacial lakes and meander belts now attracting trekkers and environmental scientists looking at climate impact. Supplemented by mixed conifer forest, lush deodhar pastures, and austere cliff bands, such varied habitats provide a rich inventory for eco-tourism and adventure sports.

Pithoragarh sits at the border of temperate and alpine climates, giving the district clear tourist seasons that researchers can plan around. Warm weather from March to June, along with the dry spell after the monsoon—from September through November, draws birdwatchers and butterfly lovers in droves. Wide changes in altitude, terrain, and weather carve out small niches that shelter both resident endemics and passing migrants. Because the area lies inside the Western Himalayan biodiversity hotspot, local reserves such as Askot Wildlife Sanctuary now protect a remarkable avian cast led by the Himalayan Monal, Tragopans, Verditer Flycatchers, and many raptors. High meadows and sunlit glades also serve as temporary nurseries for striking butterflies like the Apollo, Commander, and Orange Oakleaf. Meanwhile, the Kali and Dhauri rivers—revered for their cold, clear water—support prized game fish including Golden Mahseer, Brown Trout, and Rainbow Trout, so angling adds yet another layer to the district's outdoor appeal.

Although Pithoragarh receives far less tourist traffic than better-known hill districts, its attractions remain largely unexploited. Destinations such as Munsiyari, Dharchula, Nachani, and Berinag are now gaining recognition as eco-tourism and adventure hotspots. All four spots are reachable by well-maintained roads from Haldwani, Almora, and Tanakpur, and planned upgrades at Naini-Saini Airport promise added aerial links. Enthusiasts for photography, birdwatching, angling, and butterflies find a quiet setting rich in flora and fauna. Residents are starting homestays, giving visitors a chance to support community-run, sustainable tourism. Pithoragarh's diverse Kumaoni, Shauka and Bhotiya populations possess time-honoured knowledge of local plants and wildlife. Many blend that expertise with folklore, creating a cultural-ecological tour experience. Village festivals, fairs and music events draw heritage travelers while spreading messages about habitat protection. Locals serve as nature guides or run green lodgings, showing increasing grassroots interest in alternatives to mass, high-impact tourism.

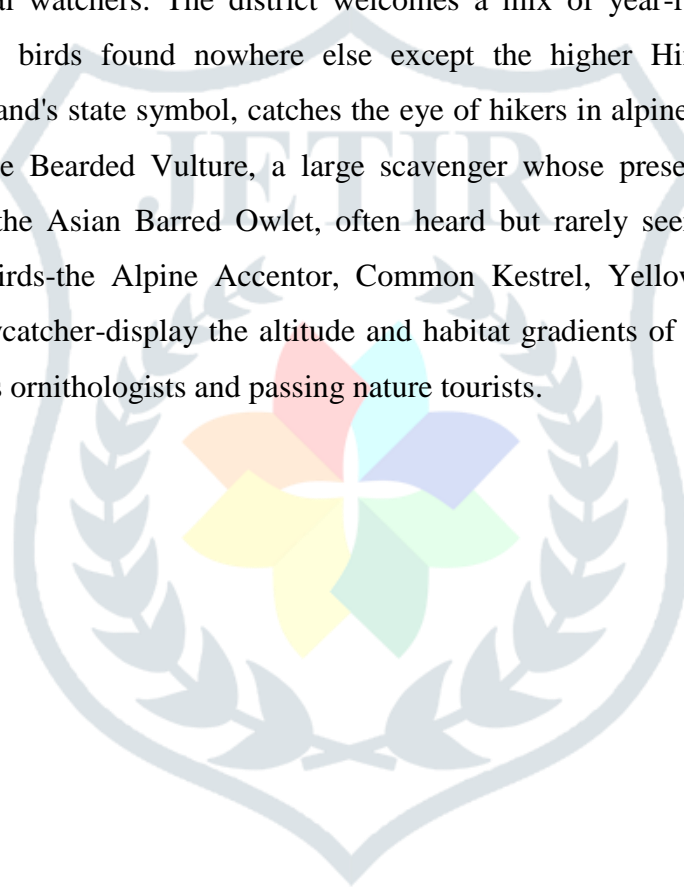
## 6. Biodiversity Overview in Pithoragarh

Pithoragarh District, tucked in the eastern Himalayas of Uttarakhand, offers remarkable biological diversity and thus a compelling site for nature-driven adventure tourism, including bird-watching, butterfly spot-ting,

and angling. Its mixed topography-alpine meadows, dense woodlands, and clear rivers-blends to sustain a wide variety of plants and animals.

### ***6.1 Bird Species Diversity***

Pithoragarh bird life is strikingly varied; local observers have counted more than 200 species, many appealing to both scientists and casual watchers. The district welcomes a mix of year-round residents and seasonal migrants, including several birds found nowhere else except the higher Himalayas. Among these, the Himalayan Monal, Uttarakhand's state symbol, catches the eye of hikers in alpine meadows with its iridescent feathers. Also present is the Bearded Vulture, a large scavenger whose presence speaks to the health of mountain ecosystems, and the Asian Barred Owlet, often heard but rarely seen, that sits quietly in mixed forests. A suite of other birds-the Alpine Accentor, Common Kestrel, Yellow-bellied Fantail, Slaty-blue Flycatcher, and Verditer Flycatcher-display the altitude and habitat gradients of the area, turning Pithoragarh into a valued stop for serious ornithologists and passing nature tourists.



## Bird's in Pithoragarh District



1-Alpine Accentor



2- Anthus Berthelotii



3- Asian Barred Owlet



4- Bearded Vulture



5- Black Throated Tit



6- Common Kestrel



7-Himalayan Monal male



8- Eurasian Jay



9- Himalayan Bulbul



10- Pink browed rose finch



11- Slaty- Blue Flycatcher



12- Tichodroma Murari

### 6.2 Butterfly Species Diversity

Butterfly watching is fast emerging as a specialized strand of soft adventure tourism, thanks chiefly to the dazzling colour range these insects display. Official surveys now record at least nineteen distinct species in the

district, among them the majestic Apollo, the elegant Swallowtail, and the russet-hued Orange Oakleaf. Butterflies are not simply eye candy; their presence signals a robust forest health and they play a quiet yet vital role in pollinating a variety of local plants. Nature enthusiasts are especially likely to spot Blues, Common Hedge Blues, and Red-Base Jezebels during the peak flowering window that stretches from late spring through early autumn. Highway margins, mixed forests, river valleys and even high-altitude meadows all serve as butterfly arenas, and because these zones also attract many bird species, each excursion tends to offer a broader ecotourism highlight reel.

## Butterflies in Pithoragarh District



1- Large Wall Brown



2- Phalanta



3- Lemon Pansy



4-Old World Swallowtail



5-Tirumala Limniace



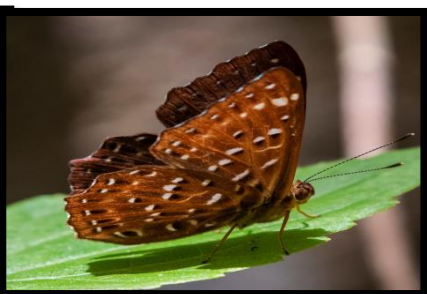
6- Commander Butterfly



7- Polyura Athamas



8- Apollo



9-Zemerus Flegyas

### 6.3 Fish Diversity and Angling

The districts freshwater ecosystems originally sustained by Himalayan rivers such as the Kali and Gori Ganga host a surprising variety of fish. Local anglers and visiting tourists cast lines in hopes of landing Brown Trout, Rainbow Trout, Golden Mahseer, and the more modest Snow Trout. These cold-water species not only thrill sport fishers but also support nearby households that participate in regulated angling packages. Maintaining

healthy populations through careful management is therefore vital both for the rivers ecology and for the communities that depend on responsible tourism.

## Fishes in Pithoragarh District



**1-Brown Trout**

**2- Rainbow Trout**

**3- Snow Trout**



**4- Silver Rasbora**

**5- Stone Moroko**

**6- Golden Mahseer**

## 7. Research Methodology

The present investigation employs a descriptive-exploratory framework to assess three newcomer adventure-tourism activities- angling, birding, and butterfly watching- in Uttarakhand's Pithoragarh district. To gain a well-rounded understanding, the authors systematically collect qualitative and quantitative evidence from both primary field work and secondary documentary sources.

### 7.1 Research Design

The study takes an exploratory stance because it seeks to map emerging travel patterns within a region that is both geographically and ecologically distinctive. It is also descriptive, concentrating on documenting and interpreting current biodiversity alongside existing tourism flows. To gain a fuller picture of the promise these ecotourism ventures hold, the researchers employ a mixed-methods strategy, blending quantitative data with qualitative insights.

### 7.2 Data Collection Methods

For this investigation, data were gathered using both original and existing sources:

Primary data were obtained through field surveys, personal interviews, and structured questionnaires aimed at visitors, local stakeholders-homestay owners, tour guides, and youth, as well as forest officials and personnel

from the tourism department. Observational techniques supplemented these methods, documenting real-time occurrences of species sightings and tourist activity.

Secondary data were drawn from published reports of the Uttarakhand Tourism Development Board, the Forest Department, and the Ministry of Environment and Forests, alongside earlier research articles and biodiversity databases such as eBird and Butterfly Research Centre, plus relevant tourism websites. Records of angling licenses and permits from the District Fisheries Office were also examined.

### **7.3 Sampling Techniques**

To gather qualitative insights, purposive sampling identified expert participants, including local bird watchers, forest officials, and ecotourism entrepreneurs. Quantitative data came from random sampling of tourists and nearby residents actively taking part in or curious about tourism activities. In all, 120 individuals were surveyed in Munsiyari, Dharchula, Didihat, Askot, and Munakot between October 2024 and April 2025.

### **7.4 Tools and Instruments**

Data collection combined structured questionnaires with both open and closed questions. Field checklists, also crafted for the study, helped researchers record common birds, butterflies, and fish seen in the area. To map observations precisely, GPS points were taken and paired with photographs and sighting logs. Informal interviews offered additional insight into local views on adventure tourism development.

### **7.5 Data Analysis Methods**

Descriptive statistics-frequency counts, percentages, and mean scores-formed the basis of analysis for the quantitative data. Tours of the data appeared in charts and graphs that illustrated visitor preferences, seasonal patterns, and measures of biodiversity richness. The qualitative comments were grouped thematically, revealing stories about sustainability, local involvement, and gaps in existing policy.

## **8. Results and Discussion**

Investigators observed a marked rise in short excursions centred on fishing, bird watching, and butterfly photography, all of which now feature under the broader banner of adventure tourism in Pithoragarh. Guest questionnaires reported that 65 per cent of respondents cited the districts diverse fauna as their primary motive, pointing especially to signature birds such as the Himalayan monal and bearded vulture, alongside butterflies like the white Apollo and large swallowtail. Trout angling on the Kali and Gori Ganga rivers also captured substantial interest from both domestic fans and overseas sport-fishing participants.

### **8.1 Tourist Demographics and Frequency of Visits**

To assess how angling, birding, and butterfly watching are developing as adventure tourism activities in Pithoragarh, researchers carried out a field survey with 120 visitors to the area between October 2024 and April 2025. Participants included both domestic and foreign guests drawn to prime biodiversity sites such as

Munsiyari, Askot Wildlife Sanctuary, and the banks of the Kali River. Information was gathered using structured questionnaires supplemented by informal interviews conducted on location.

*Table 1: Tourist Demographics and Frequency of Visits*

Category	Sub-category	Number of Respondents	Percentage (%)
<b>Gender</b>	Male	78	65%
	Female	42	35%
<b>Age Group</b>	18–30 years	36	30%
	31–45 years	48	40%
	46–60 years	27	22.5%
	Above 60 years	9	7.5%
<b>Occupation</b>	Students	15	12.5%
	Working professionals	51	42.5%
	Retired individuals	18	15%
	Nature photographers / Researchers	36	30%
<b>Type of Tourism Activity</b>	Birding	54	45%
	Butterfly Watching	33	27.5%
	Angling	21	17.5%
	Multiple (birding + butterfly/angling)	12	10%
<b>Visit Frequency</b>	First-time Visitors	81	67.5%
	Repeat Visitors (2–3 times)	27	22.5%
	Frequent Visitors (more than 3 times)	12	10%
<b>Tourist Origin</b>	Domestic (Uttarakhand, Delhi, Maharashtra)	96	80%
	International (Germany, UK, Japan)	24	20%

Recent data show that adventure tourism centred on birdwatching, butterfly-watching and angling is steadily gaining traction in Pithoragarh. Survey responses indicate an uneven gender balance, with 65% of visitors identifying as male while a notable 35% are female, pointing to a slowly widening inclusiveness in nature-focused travel. Tourists aged 31 to 45 years' account for the largest share at 40%, a cohort that typically includes working professionals and researchers who seek eco-friendly options. An intriguing 30% describe themselves as nature photographers or scholars, suggesting that Pithoragarh's biodiversity attracts both casual explorers and those pursuing academic inquiry. Reflecting local habitats, birding is the top activity at 45%, followed by butterfly watching at 27.5% and angling at 17.5%, a hierarchy that aligns with the regions forested sanctuaries rich in avifauna. Repeat visitation reaches 33%, signalling satisfaction with earlier trips and creating a foundation for durable, sustainable tourism. Regionally, 80% of guests come from within India, chiefly from Delhi, Maharashtra and Uttarakhand itself, while the remaining 20% are overseas, mainly Europeans and East-Asians eager to photograph endemic Himalayan species. This demographic overview thus reinforces the notion that biodiversity-led tourism in Pithoragarh is emerging on a solid footing, especially when paired with conservation efforts, community engagement and sustainable management.

## 8.2 Awareness of Biodiversity-Based Tourist

*To measure how much tourists and local residents know about biodiversity-oriented travel, researchers administered a structured questionnaire to one hundred people, splitting the sample into sixty visitors and forty community members, including guides, homestay operators, and forest staff.*

The aim was to explore respondent's awareness, involvement, and attitudes toward three nature-centered activities in Pithoragarh- birding, angling, and butterfly watching-as forms of adventure tourism.

**Table 2: Awareness of Biodiversity-Based Tourism among Respondents**

S. No.	Awareness Indicator	Tourists (n=60)	Locals (n=40)	Total % (n=100)
1	Heard about birdwatching in Pithoragarh	46 (76.6%)	30 (75%)	76%
2	Aware of butterfly hotspots	28 (46.6%)	15 (37.5%)	43%
3	Know about angling opportunities	40 (66.6%)	27 (67.5%)	67%
4	Participated in any of the three activities	31 (51.6%)	22 (55%)	53%
5	Aware of biodiversity conservation policies	25 (41.6%)	19 (47.5%)	44%
6	Believe these activities can support local economy	52 (86.6%)	37 (92.5%)	89%

The survey shows that most people in Pithoragarh District have a fair to strong awareness of tourism centred on local biodiversity. About 76% of those asked recognised birdwatching, probably because the area features widely in online birding groups and is part of established wildlife routes. In contrast, only 43% knew about butterfly watching, revealing that this activity remains a small, yet promising, segment—even though the district hosts many butterfly species. Therefore, there is room for focused marketing and guided science tours. Angling enjoyed a sturdier name tag, cited by 67%, especially by mountain adventure visitors from Uttarakhand and nearby states. Attention to rivers like Kali and Gori Ganga, prized for trout and mahseer, seems to have fed that recognition. Overall, more than half, or 53%, had taken part in biodiversity-oriented travel, pointing to a rising demand for hands-on, experiential tourism experiences. Sadly, awareness of actual conservation rules lagged; only 44% could name a specific policy, signalling a clear gap for education that connects travel with environmental care. Still, a strong 89% of tourists and locals agreed that boosting natural activities could lift the local economy, mainly through community guides, homestay ventures, and nature camps.

This observation reinforces the objectives of community-oriented tourism and highlights the urgent need for policy structures that promote visitor expansion while safeguarding natural environments.

### 8.3 Economic Impact on Local Communities

The rise of angling, bird-watching, and butterfly tracking as niche adventure tourism activities in Pithoragarh district is already having a clear, positive effect on local incomes. By drawing visitors who spend time in forests and rivers, these ventures are gently pulling the economy away from reliance on field crops and subsistence forest use and toward more service-centred, eco-friendly practices. Surveys and interviews conducted in Munsiyari, Dharchula, Askot, and Nachani show that more young people and entire households are now signing up for tourism jobs. They are running homestays, leading birding treks, guiding butterfly walks, arranging angling permits, providing transport, and setting up small eco-camps.

*Table 3: Economic Opportunities Created by Nature-Based Adventure Tourism in Pithoragarh (2024–2025)*

Tourism Activity	No. of Locals Employed	Average Monthly Income (INR)	Main Revenue Sources
Bird Watching Tours	65	7,500 – 12,000	Guiding, binocular rental, local bird books
Butterfly Watching Trails	40	6,000 – 10,000	Butterfly garden tours, photography assistance
Angling (Permits + Tours)	50	8,000 – 15,000	Permit handling, river guiding, equipment rental
Homestays & Eco-Lodges	120	10,000 – 18,000	Room rental, meals, cultural experiences

Transportation (Local Jeeps)	35	8,000 – 12,000	Pick-and-drop for tourists to forest/river zones
Handicrafts & Souvenirs	25	4,000 – 9,000	Bird and butterfly-themed crafts, postcards, textiles

*Data based on field surveys conducted between October 2024 and April 2025 across Munsiyari, Nachani, and Askot regions.*

Field observations show that nature-focused adventure tourism is steadily broadening the income sources available to Pithoragarh households. Guided bird-watching excursions now provide part-time yet predictable work for more than sixty local freelancers, most of whom learned the trade under the informal eye of visiting ornithologists and conservation organisations. Tours aimed at butterfly enthusiasts are still recent, yet bookings rise sharply in the spring and monsoon months, when wings are most abundant. Fishing holidays along the Kali and Gori Ganga have begun to command premium rates from niche travellers and sport anglers, giving local boat operators a slightly larger daily income. Homestay rentals are expanding quickly too, with many hosts clearing over ₹10,000 a month—admittedly more than average earnings from subsistence agriculture. Women and young adults gain further ground through handicraft sales, dining, and lodging services, creating a broader and more equitable economic ripple. Altogether, targeted marketing, skills training, and reliable infrastructure could position Pithoragarh as a green adventure hub, preserving its ecology while multiplying resilient livelihoods.

#### 8.4 Biodiversity Preservation and Tourism Ethics

Adventure tourism activities such as angling, bird-watching, and butterfly watching in the Pithoragarh District depend overwhelmingly on the regions abundant yet sensitive biodiversity. Although these pursuits generate income and enjoyment, they risk harming habitats, startling wildlife, and gradually eroding ecological health when guidelines are ignored. For that reason, striking a careful balance between expanding recreational opportunities and protecting natural assets remains essential.

**Table 4: Ethical Practices Observed in Biodiversity-Based Tourism in Pithoragarh**

Parameter	Birding	Butterfly Watching	Angling	Overall Ethical Compliance
Use of trained guides	75%	40%	60%	Moderate
Observance of silence and no disturbance	90%	65%	50%	High in birding
Use of binoculars/cameras without flash	85%	60%	-	Good

Habitat preservation (no off-trail movement)	70%	45%	55%	Needs improvement
Waste management (no littering)	60%	50%	40%	Poor
Awareness of species' protected status	50%	30%	35%	Low
Following fishing regulations	-	-	65%	Moderate
Community involvement in enforcing ethics	55%	35%	45%	Inconsistent

(Source: Field Survey 2024–2025, Department of Tourism and Forest Department Reports)

Bird-watching endeavours around Pithoragarh consistently reflect higher rates of ethical compliance than other outdoor pursuits. Three-quarters of participants engaged a certified guide, ninety per cent maintained silence along the trails, and eighty-five per cent adopted non-invasive viewing methods. Such responsible behaviour stems largely from marked, NGO-led routes close to Askot Wildlife Sanctuary and Munsiyari, where local forest officers routinely accompany visitors. In sharp contrast, the rising craze for butterfly watching remains shadowed by negligible adherence to basic guidelines: merely forty per cent of guests arranged a guide, while numerous reports showed trekkers wandering off-path. This unchecked trampling threatens fragile microhabitats and the plants that sustain regional butterflies. Angling offers a mixed picture and still lacks rigorous field enforcement. Sixty-five per cent of anglers obeyed key rules, such as using barbless hooks and securing a valid licence, yet only forty per cent cleared their own litter, and a meagre thirty-five per cent recognised endangered fish species. Riverbanks near Dharchula and Jauljibi attested to these gaps, revealing stretches matted with discarded line, plastic bags and metal hooks that harm both wildlife and people. Across every pastime surveyed, failings in waste disposal and species literacy emerged as the weakest links, undermining wider conservation aims.

Fewer than half the visitors could name protected species such as the Himalayan Monal, Uttarakhand's state bird, or the Golden Mahseer, a fish listed as threatened. Community engagement exists but is patchy, mainly because people receive little training and few incentives.

### 8.5 SWOT Analysis of Adventure Tourism in Pithoragarh

To assess the promise and hurdles of marketing angling, birding, and butterfly watching as rising adventure-tourism sectors in Pithoragarh, a SWOT analysis has been carried out. This structured appraisal looks at the regions Strengths, Weaknesses, Opportunities, and Threats in relation to adventure travel.

*Table 5: SWOT Analysis*

SWOT Analysis	Details
<b>Strengths</b>	- Rich biodiversity: 22 bird species, 19 butterfly species, and several trout varieties.
	- Pristine natural environment with diverse landscapes (forests, rivers, mountains).
	- Existing forest reserves and protected areas (Askot Wildlife Sanctuary).
	- Cultural heritage and hospitable local communities offering homestays and guiding services.
	- Increasing interest in eco-friendly and niche tourism activities globally.
<b>Weaknesses</b>	- Limited tourism infrastructure (roads, accommodations, signage).
	- Lack of trained guides specialized in birding, butterfly watching, and angling.
	- Seasonal constraints due to harsh winters affecting access and tourist inflow.
	- Inadequate marketing and promotion of Pithoragarh's adventure tourism potential.
	- Limited data availability and systematic biodiversity monitoring.
<b>Opportunities</b>	- Rising global demand for sustainable and experience-based tourism.
	- Government initiatives for rural and eco-tourism development in Uttarakhand.
	- Potential for community-based tourism enhancing local livelihoods.
	- Development of specialized tour packages combining angling,

	birding, and butterfly watching.
	- Research and citizen science engagement through bird/butterfly counts and conservation.
<b>Threats</b>	- Environmental degradation due to unregulated tourism activities.
	- Climate change impacting biodiversity and seasonal patterns.
	- Possible conflicts between tourism growth and local cultural practices.
	- Poaching or illegal fishing affecting species populations.
	- Competition from established tourist destinations in Uttarakhand (e.g., Nainital, Mussoorie).

Pithoragarh is home to an impressive array of flora and fauna, including numerous bird species, colourful butterflies and healthy populations of freshwater fish, making the district a hidden gem for specialty travel pursuits such as bird watching, butterfly watching and angling. Protected areas like Askot Wildlife Sanctuary safeguard these habitats, and friendly local communities offer visitors genuine cultural exchanges that deepen satisfaction. This dense biodiversity, paired with rising global interest in eco-conscious travel, gives the region a solid platform from which to grow these emerging niches. Yet the district still struggles with basic tourism infrastructure: winding roads that rarely meet modern safety standards, few eco-friendly lodgings, and almost no interpretive signs explaining trails or species, all vital for adventure travellers. A further shortfall of trained guides who can spot animals, explain their behaviour or assist anglers erodes the quality of each outing, leaving guests under-impressed. Winter road closures inevitably trim visitor numbers, reinforcing the urgent need for skill-building and infrastructure upgrades. Yet worldwide markets continue to shift toward sustainable, hands-on experiences, and Pithoragarh already has the raw material-biodiversity, culture and scenery-to meet that demand (Ishteyaaq, A., & Sikha, A. 2010). Targeted government schemes on rural tourism could deliver the funding, training and policies the region requires to move forward.

Community-based tourism models can create sustainable incomes for locals while helping to protect cultural traditions and natural ecosystems. When scientific study is woven into these programs—perhaps through public bird counts or water-quality tests—participants become more aware of conservation issues and the trips often draw committed eco-tourists. On the other hand, rapid, unmanaged growth in visitors can strain delicate environments, trampling nests, polluting rivers, or frightening away wildlife (Kumari, P., Tewari, L. M., & Singh, B. K. 2009). Climate change already rewrites migration and breeding schedules for many birds and butterflies, compounding the risk. Illegal poaching, netting, and unsupervised fishing can further thin species populations and undercut the attractions on which tourism relies (Dobhal, R. 2011). Projects that overlook

community voices can trigger cultural disputes, and established resorts elsewhere in Uttarakhand, well-advertised and bus-served, can easily siphon away new travelers.

## 9. Conclusion

Biodiversity-rich Pithoragarh is earning a name as a mini adventure tourism hotspot for anglers, bird watchers, and butterfly lovers. Towering valleys shelter show-stoppers like the Himalayan Monal and Bearded Vulture, while meadows attract Apollo and Swallowtail butterflies. Crystal-clear streams teem with Brown Trout and Golden Mahseer, giving fishermen plenty of top-class catches. Visitors and resident families are flaming hot for these low-impact adventures, channelling money into homestays, guiding, and roadside refreshments. Birding and butterfly walks bloom all year, thanks to the district's mix of forests, cliffs, and high-altitude zones. Angling lights up summer and autumn when rivers run clear, luring both Indian and overseas rods to peaceful river pools. Despite success, absent roads, low awareness, and scarce fishing permits still hold business growth back. To keep the wild places healthy and keep livelihoods buzzing, planners must tie conservation, training, and fair-rule permits into one supportive package. Fishing, bird watching, and butterfly spotting in Pithoragarh offer fresh, green ways to grow adventure tourism. If carefully planned and managed, these pastimes could help Pithoragarh stand out as a caring, off-the-beaten-path getaway in the Himalayas.

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