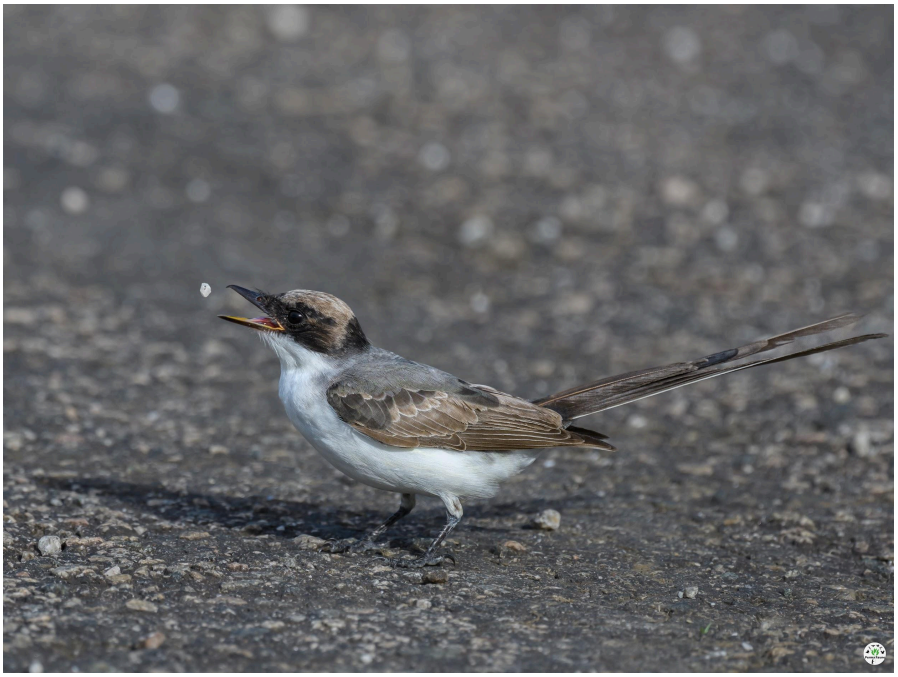
Evidence of grit ingestion by a juvenile Fork-tailed flycatcher (*Tyrannus savana*) in Kourou, French-Guyana

03/06/2026
Jules Greff - Permafaune.com



On 3 June 2026 at 16:45, a recently arrived austral migrant Fork-tailed Flycatcher (Tyrannus savana) was observed along the Route de Guatemala, in grazed pastures bordering the D13 road (Between Kourou and Macouria) within a flock of approximately fifty Shiny Cowbirds (Molothrus bonariensis). The cowbirds alternated between ground foraging, bathing in puddles on the road surface, and preening while perched on roadside fences.

The flycatcher was perched on the same barbed-wire fences, possibly benefiting from the increased vigilance provided by the flock. It remained motionless on its perch, except for continuous head movements typical of tyrant flycatchers scanning their surroundings.
After a rapid and highly accurate sallied flight, the bird captured what appeared to be a small hymenopteran perched on the inflorescence of a grass stem. Approximately five minutes later, the same hunting sequence was repeated twice, resulting in the capture of two additional unidentified insects, possibly a hymenopteran and a beetle.

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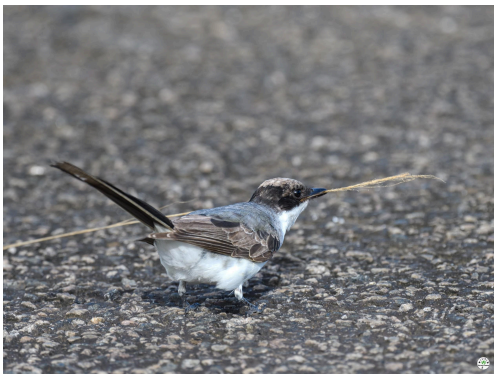
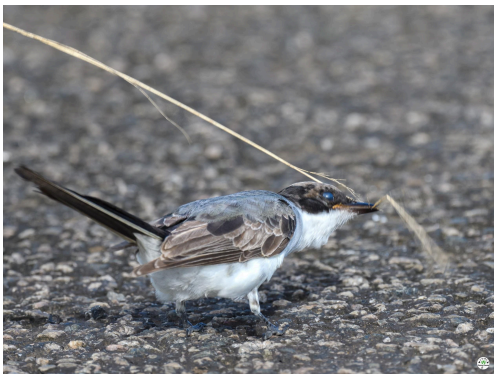
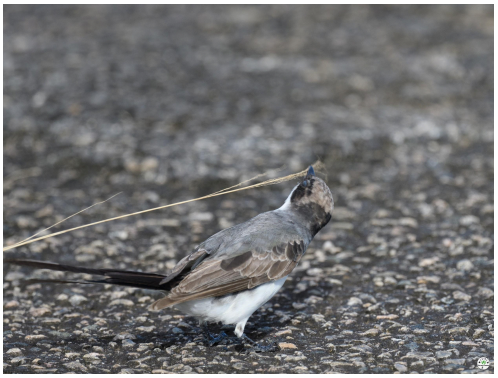
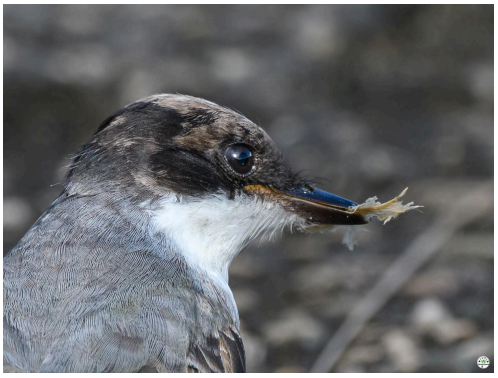
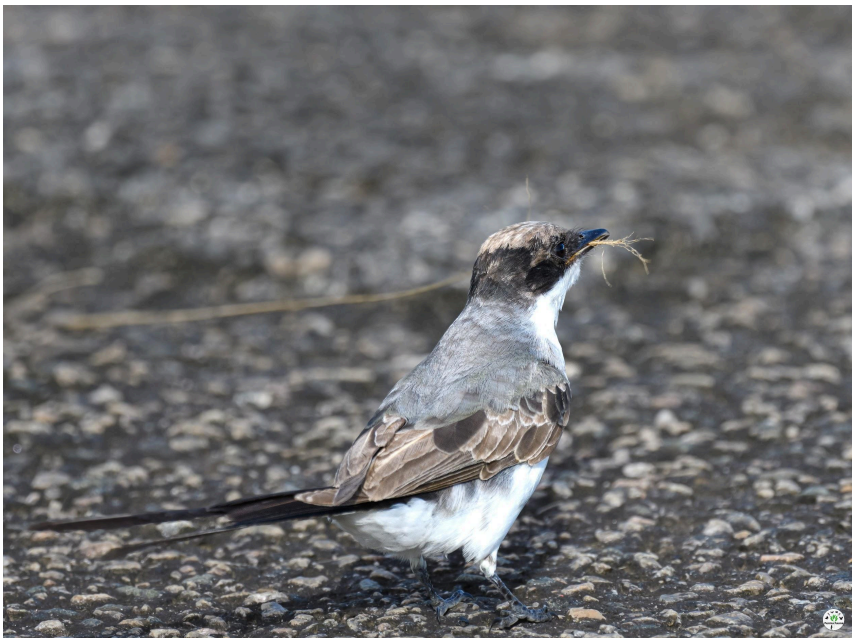








The bird subsequently descended to the ground onto the road itself, where several cowbirds were still present near their bathing site. It appeared interested in a grass stem lying on the ground.
The flycatcher picked up the stem, remained motionless for approximately ten seconds, then shook it repeatedly and dragged it over a short distance (approximately 30 cm). It eventually broke off a fragment, retained it briefly in its bill, and then discarded it.
About one minute later, it picked up another grass stem, this time grasping it near the seed-bearing tip.
The observed behaviour, together with the photographic evidence, suggests a possible attempt to consume the remaining seeds, although this interpretation remains uncertain.



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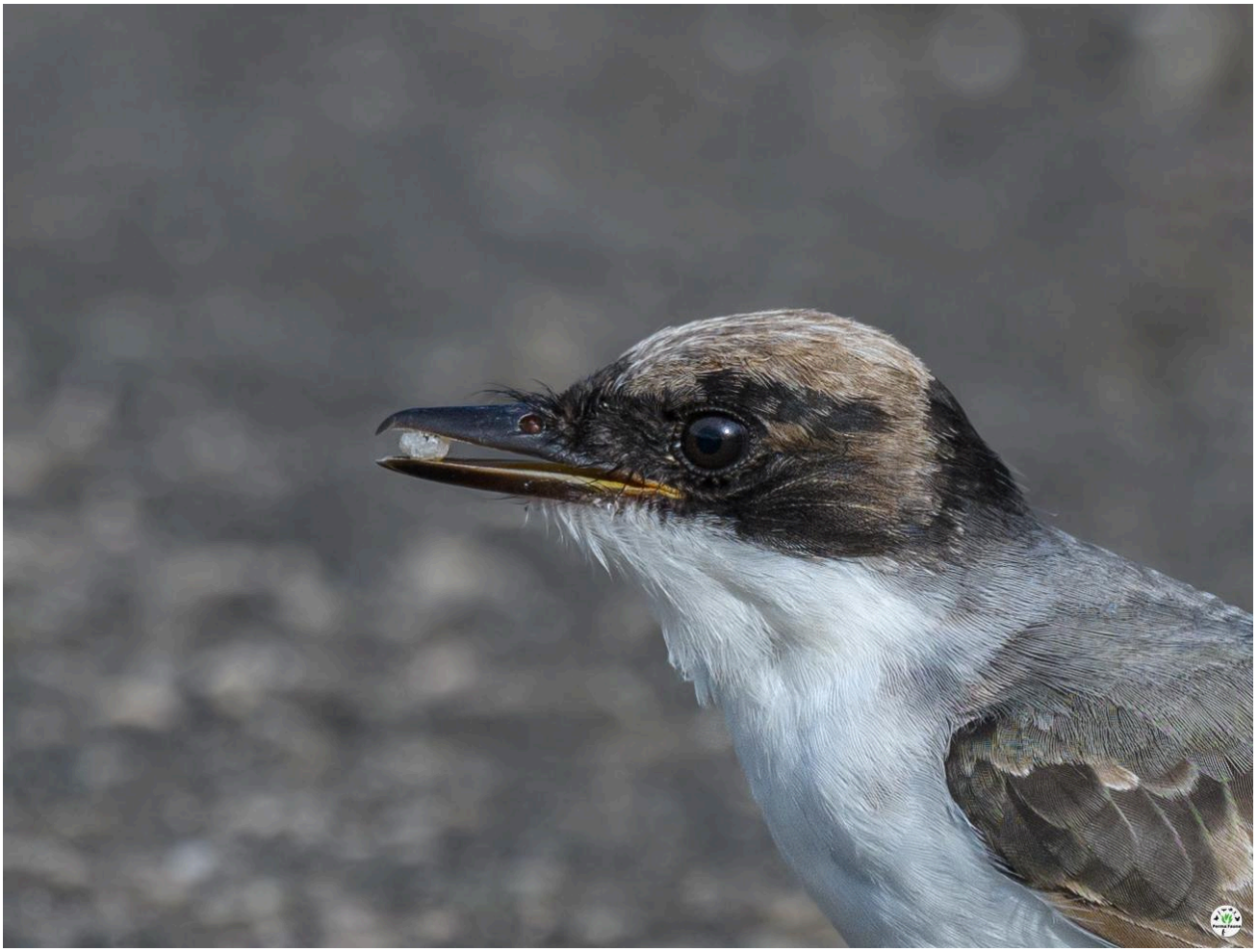
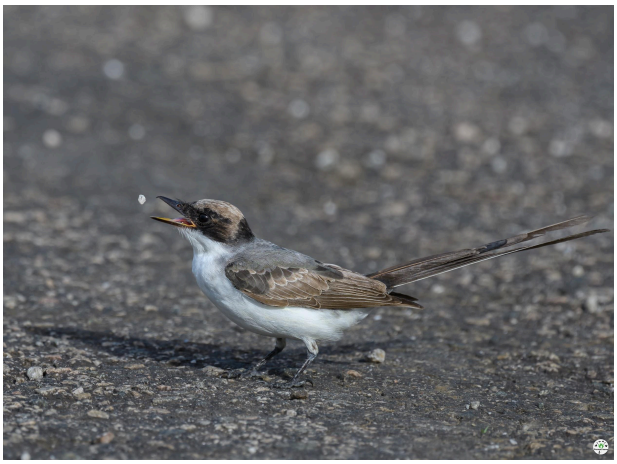
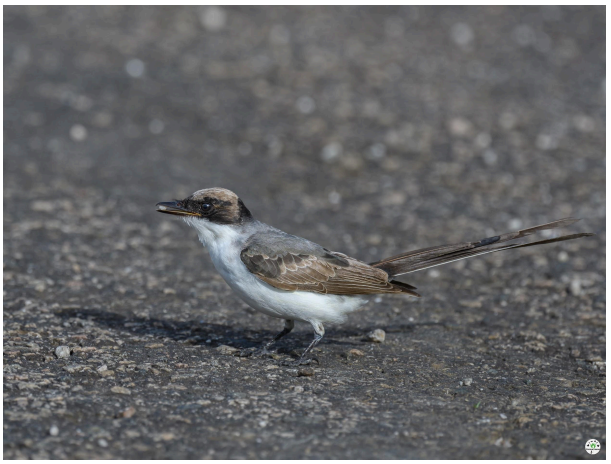
While still foraging on the road surface, the bird suddenly picked up and swallowed a small object before it could be identified. The area contained numerous small gravel particles, leading to the initial hypothesis that the object may have been a grit. However, the possibility that it was a small insect or seed could not be excluded. Shortly afterward, the behaviour was repeated, allowing photographs to be obtained of the item being ingested.







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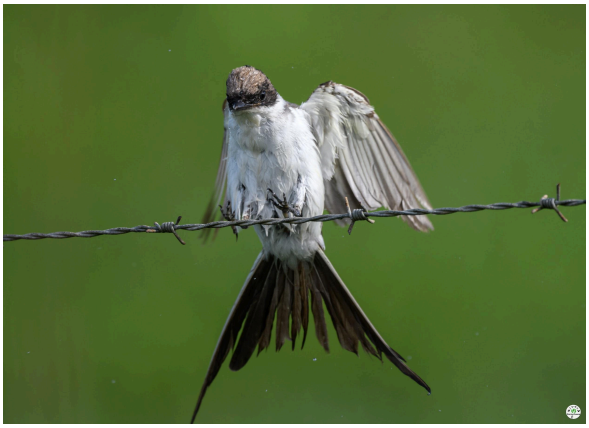
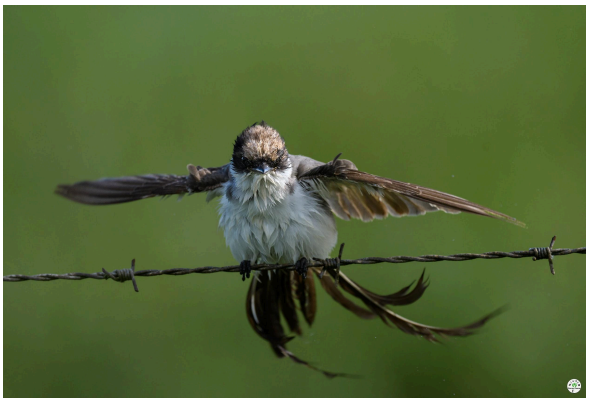
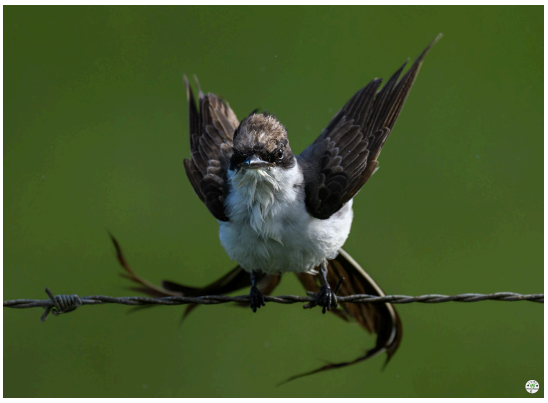
Following these observations, the flycatcher returned to its perch on the barbed-wire fence. After a brief pause, it suddenly left the perch and performed a rapid, direct flight toward a flooded pasture adjacent to the road. Without slowing noticeably, the bird briefly immersed itself in the water during flight before immediately returning to the same perch. Once settled, it engaged in vigorous shaking, preening, and feather maintenance behaviour, carefully realigning its plumage. This sequence was repeated three times, with alternating bouts of aerial bathing and subsequent preening. Following the final bathing event, the bird departed the area and was not observed again.







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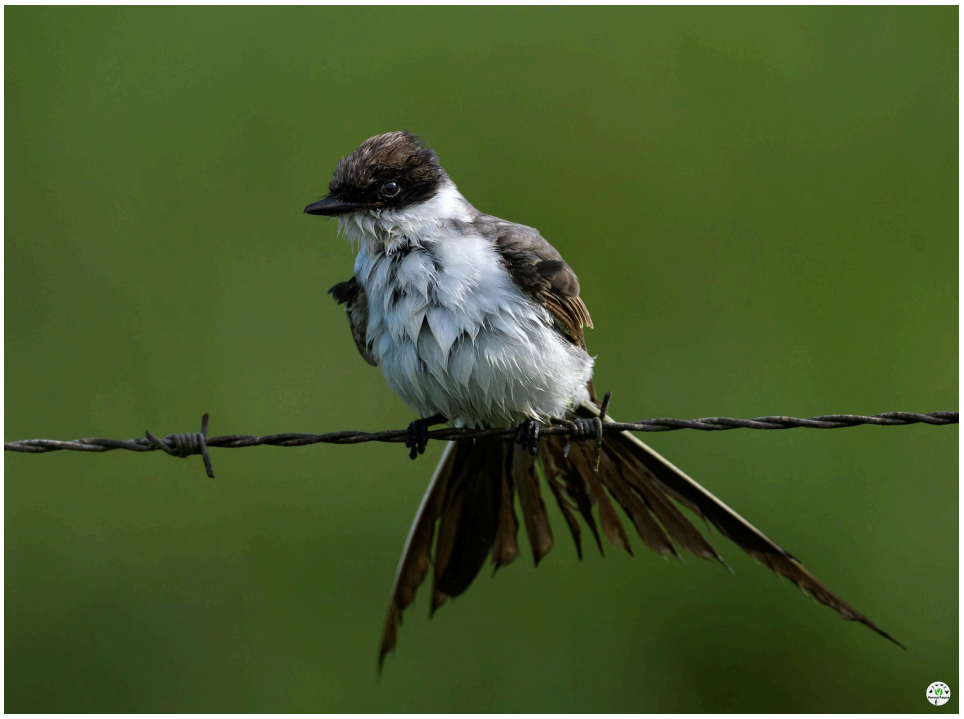

The most widely accepted explanation for grit ingestion in birds is its role in facilitating mechanical digestion. Once swallowed, small stones accumulate in the gizzard and aid in grinding food items before they pass into the intestine (Ziswiler & Farner 1972; Brown 1976; Barrentine 1980; Bishton 1986; Gionfriddo & Best 1999). Grit ingestion has also been proposed as a means of acquiring minerals, particularly calcium (Sadler 1961; Harper 1964; Korschgen 1964; Campbell & Leatherland 1983; Adam & des Lauriers 1998).
Several authors have suggested that females ingest mineral-rich grit to obtain calcium required for eggshell formation (Verbeek 1971; des Lauriers 1994; Adam & des Lauriers 1998; Graves 2007; Estades et al. 2008; Hickman et al. 2012). Robinson et al. (2008) further proposed a possible self-medication function for small-stone ingestion in Double-crested Cormorants (Nannopterum auritum).
The study by Maya-García et al. (2021) on grit ingestion in hummingbirds proposed that juveniles may ingest gravel to facilitate and accelerate digestion during periods of rapid growth. Beyond the traditionally recognized role of processing hard food items such as seeds, small stones may also assist in grinding arthropods, which constitute an important protein source for tissue development (Ziswiler & Farner 1972; Brown 1976; Barrentine 1980; Bishton 1986; Gionfriddo & Best 1999). Similar nutritional demands occur in breeding females, which increase arthropod consumption to obtain proteins required for egg production and chick provisioning (Hainsworth 1977; Montgomerie & Redsell 1980; Chavez-Ramirez & Dowd 1992; Stiles 1995; Murphy 1996; Rico-Guevara 2008). Furthermore, Maya-García et al. (2021) suggested that, given the high nutritional requirements of developing hummingbirds, ingested stones may also provide essential

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minerals for skeletal development after fledging (Harper 1963; Tilgar et al. 2004; Reynolds & Perrins 2010).
This hypothesis may be particularly relevant to the present observation. The observed Fork-tailed Flycatcher appeared to be a juvenile based on several plumage characteristics, including a brownish crown and wing coverts, relatively short tail streamers, and visible fleshy gape flanges. At the same time, its diet appeared to consist primarily of arthropods, potentially increasing the functional value of grit ingestion for digestive efficiency.

Although grit ingestion has been documented in numerous avian taxa, relatively few studies have examined this behaviour in predominantly insectivorous species, and even fewer in tyrant flycatchers. Observations involving juvenile individuals are especially scarce. Additional studies are therefore needed to better understand the ecological and physiological significance of grit ingestion in insectivorous passerines and to evaluate whether the parallels proposed here are valid.

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