years. The Shawangunks lie within that historic migration corridor, in large part because of the topography of the area: long linear ridges oriented in such a way as to capture seasonal prevailing winds that facilitate soaring/gliding flight and are conducive to southward movements. As a result, migrating raptors are often concentrated along the ridges during migration and are able to travel from their breeding grounds to their wintering grounds with reduced or minimal energy expenditure.

Such habits rely on "thermals," pockets of warm air that form when radiant energy from the sun strikes the earth. The subsequent heating of the earth's surface by several degrees causes a warmed bubble of air to rise. When it mixes with the surrounding air, the thermal spot grows.

Migrating raptors locate these thermals, soaring upwards until they reach the top and then gliding off to the next one. As the season progresses into late October through December and the air and temperatures cool, thermal production decreases. Many migrating raptors then rely on a combination of gliding and/or flapping flight rather than soaring.

As land is carved up for development ... maintaining migration paths for birds and many other animals may well be one of the greatest conservation challenges.

Conservationists and bird watchers, including many volunteers, have spent thousands of hours recording the passage of raptors across regional mountain corridors. This work has also documented the historic return to the Shawangunks of native raptors such as the peregrine falcon after decades of absence because of the widespread use of the now-banned pesticide DDT, which thinned the shells of many birds of prey and led to a rapid decline in their populations.

In large part because of the knowledge gathered, many areas in Pennsylvania, New Jersey and along the Shawangunks are internationally recognized as Important Bird Areas because of the central role they play in ensuring the survival of birds, including species considered rare and imperiled. In turn, these areas continue to play such a significant role because of the widespread protection of forests, mountain ridges and other habitats.

As land is carved up for development and habitat is lost worldwide, maintaining migration paths for birds and many other animals may well be one of the greatest conservation challenges in years to come. Scientists increasingly recognize migratory species are particularly vulnerable to changes in habitat and climate, making the protection of areas through which these animals move top priorities.

Fortunately, locations such as the Shawangunks — where conservation efforts have successfully preserved a substantial flyway and migration path — ensure wildlife can still follow the ancient patterns necessary for their survival. We can continue to watch birds not only fly away, but also return season after season and year after year.

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