

Collier earns Athlete of the Week award

HOMETOWN REPORT
by
GARY HENLEY

PORTLAND — Warrenton's Emmi Collier was one of two student-athletes from Western Oregon University honored Monday for their athletic achievements the previous week.

Collier and WOU men's basketball player Andy Avgi were named Great North-west Athletic Conference (GNAC) Players of the Week in their respective sports, as announced by the league office.

A graduate of Warrenton High School and now a junior on the WOU track & field roster, Collier posted a mark of 43 feet, 3.75 inches in the shot put at the Husky Invite, held Saturday at the University of Washington.

The mark was just a quarter inch shy of the provisional national qualifying standard. Collier ranks second in the GNAC in the shot put this season.

It was Collier's first weekly award from the conference office, and Western Oregon's first since May, when a pair of Wolves swept the weekly honors.

"This is by far the coolest thing to happen to me in my college athletic career," Collier posted on her Facebook page.

Western's track & field



Members of the Western Oregon track team, following the recent Husky Invite indoor track meet, Jan. 17 in Seattle. From left to right, assistant coach Matt Schryvers, Emmi Collier (Warrenton), Allison Cook (Coquille), Alex Green (Newberg), Sam Moore (Newport) and Kenny Klippel (Scappoose).

teams return to action this weekend at the Cougar Indoor, Friday and Saturday at Washington State.

Lewis earns Player of the Game

In other action involving local athletes at the collegiate level, Seaside's Kaitlin Lewis recently scored Player of the Game honors in a win for the Lower Columbia women's basketball team.

Seventh-ranked LCC stunned No. 1-ranked Centralia 63-47 in an NWAC Western Division showdown Jan. 24 Ted M. Natt Court.

The victory put the Lady Devils at the top of the division at 7-0, 14-7 overall.

Lower Columbia took advantage of some early Centralia turnovers with 12 straight points, including six from Lewis, LCC's freshman from Seaside.

In her first start for the Red Devils, Lewis had 14 points, six rebounds and four assists.

Former Rainier standout Kaylea Knox led LCC with 17 points, while Warrenton's Mady Hanna added five points.

In a 50-39 win over South Puget Sound Saturday, Lewis scored nine points with six rebounds and two steals.

Other local athletes per-

forming this winter at the collegiate level:

ASTORIA

Jon Williams, So., Linfield swimming
Dean Winters, Fr., Boise State track

SEASIDE

Lucas Clark, So., Western Oregon track
Kaitlin Lewis, Fr., Lower CC basketball

Brett Willyard, RFR., Oregon track
WARRENTON
Emmi Collier, Jr., Western Oregon track

Kimberly Elkins, Fr., Grays Harbor basketball
Mady Hanna, So., Lower CC basketball

JEWELL

Luke Swearingen, Fr., Portland CC basketball

Banks

Lexi Chung, Blue Mountain CC basketball
Riley Gerlinger, Blue Mountain CC basketball

Matt Hidalgo, Jr., Oregon track

Scappoose

Jonathan Clark, Warner-Pacific track

Kenny Klippel, Western Oregon track

Paul Revis, Western Oregon track
Lacey Updike, Mt. Hood basketball

Tillamook

Trevar Cooley, Linn-Benton basketball

Jordan Schriber, Western Oregon basketball

Dylan Tohl, Pacific swimming

Valley Catholic

Gabe Taylor, U. of Portland basketball

Clatskanie

David Adkinson, Pacific wrestling

Rainier

Brandon Cataldo, Portland State basketball

Kaylea Knox, Lower CC basketball

Vernonia

Austin Best-Cutright, Lower CC basketball

Katerina Brejchova, Lower CC basketball

Stephanie Castro, Chemeketa basketball

Letters-of-intent:

Astoria

Bailey Haskell, Centralia softball

Banks

Dylan Bigsby, Eastern Oregon football

Alyssa Chung, Clackamas volleyball

Madison Soper, Carroll College softball

Emily Vandehey, Highline CC soccer

Hannah VanDomelen, Clackamas softball

Scappoose

David Krupsky, Western Oregon football

Emily Muth, Dominican University soccer

Basketball: Knights sweep Warriors

WARRENTON — The De La Salle basketball teams swept a doubleheader from Warrenton Tuesday night, in Lewis & Clark League action.

De La Salle opened with a 37-28 win over the Lady Warriors in the girls' game, sending Warrenton to its seventh straight defeat.

The Knights capped the

night with a 73-30 victory over the Warrenton boys, as De La Salle improved to 11-2 in league, and are currently rated No. 7 in the Class 3A OSAA rankings.

SCOREBOARD

PREP SCHEDULE

TODAY

Boys Basketball — Ilwaco at Raymond, 7 p.m.

FRIDAY

Girls Basketball — Astoria at Banks, 5:30 p.m.; Seaside at

Scappoose, 5:30 p.m.; Warrenton at Riverdale, 6 p.m.; Gaston at Knappa, 6 p.m.; Jewell at C.S. Lewis, 5:30 p.m.; Raymond at Ilwaco, 7 p.m.

Boys Basketball — Astoria at Banks, 7:15 p.m.; Seaside at Scappoose, 7:15 p.m.; Warrenton at Riverdale, 7:45 p.m.; Gaston at

Knappa, 7:45 p.m.; Jewell at C.S. Lewis, 7 p.m.

Swimming — Cowapa League Championships, St. Helens, 4 p.m.

SATURDAY

Wrestling — Cowapa League Championships, Banks, 10 a.m.

Blob: Study predicts massive shifts of West Coast marine species

Continued from Page 1A

Though things like the blob have happened before — Bond says they have reliable records back to 1980 and a "good idea of what's going on back to 1950" — this particular blob was "pretty extreme in terms of how much warmer it was than normal and its magnitude."

When masses like the blob form, they tend to stick around for a while. Then they slowly get torn apart and dispersed as weather patterns shift. The same thing is happening to the blob now. The warm waters we're still seeing are a kind of "hangover from the blob," Bond said.

The horror itself is disappearing. For now.

As Bond puts it, "The weird weather we had in the winter of 2013 and through 2014 was kind of a fluke."

The climate is built to contain these kinds of variations.

"But on the other hand," Bond continued, "I think we are seeing slow warming of the oceans. In a way, we can learn from these kinds of incidents about the sort of changes we are expecting to see as a part of climate change. ... We are quite confident it's already happening. We're confident it's going to continue. Warming like this is on the way."

Washington woes

According to a 2006 study focusing on Washington state, the U.S. is the largest source of greenhouse gas emissions, a primary driver of climate change. Washington contributes about 85 to 90 million tons each year to the global total from energy use — about 0.3 percent of worldwide emissions, according to some estimates.

This puts Washington's yearly emissions per capita per person at about 13.5 tons of CO₂, more than the world average of 4 tons per person but lower than the U.S. average of 20 tons per person. For that, we can thank the dams, the study's authors said.

"This reliance on (electricity generated by dams), though damaging to salmon and freshwater ecosystems, means that Washington residents lead somewhat less carbon-intensive lives than most Americans," the study says.

But that number — 13.5 tons per person — continues to grow and is projected to swell over the next 25 years as the population grows.

With climate change, researchers expect a laundry list of changes in Washington: more frequent and more severe wildfires, rising sea levels, warmer and more acidic oceans, seasonal drought,



DAMIAN MULINIX — EO Media Group

Scientists say that unusually warm ocean conditions in 2014 are a preview of conditions that will become routine as the Pacific retains more atmospheric heat. This will impact migratory patterns and other aspects of existence for salmon like these that returned to spawn in a Southwest Washington river.

hot and dry summers, cold winters.

In such a slippery environment, certain species will thrive, some will leave as others move in. Some will vanish.

Some are already on the move.

Fisheries in a changing climate

A recent study published in *Progress in Oceanography* predicts massive shifts of West Coast marine species — everything from sharks to salmon — northwards an average of 30 kilometers per decade.

"As the climate warms, the species will follow the conditions they're adapted to," said Richard Brodeur, a NOAA Fisheries senior scientist at the Northwest Fisheries Science Center and co-author of the study.

As the species shift — not necessarily in lockstep, prey and predator together — there will be "winners and losers that we cannot foresee," he said.

And what it means for Washington's commercial and recreational fisheries is anyone's guess.

Commercial fishing jobs and the millions of dollars of personal income

they generate may barely register on Washington's overall net earnings, making up a small percentage of what keeps the state moving. In communities like Pacific County, however, where all types of fishing and seafood processing have been a traditional way of life and remain vital to the economies of many small towns, those earnings loom large.

And among fish, few species loom larger here than salmon.

The phrase "climate change" is not directly referenced in the discussions fisheries managers have when they set salmon seasons each year in a process called North of Falcon, said Doug Millward, of the Washington Department of Fish and Wildlife and a member of the Salmon Technical Team that informs the North of Falcon process.

Still, the vast suite of data they examine each year tells the story of climate change: rising temperatures, ocean acidification, habitat loss and gain, ocean health, stream and river health, salmon health.

"It's definitely there," Millward said. "Even if it's not stated as such."

Changing life cycles

Researchers know a lot about what needs to happen in freshwater to help salmon thrive and they say the quality of freshwater habitats could make or break future runs. The ocean is a different story. A warmer, less productive ocean — the blob was just a taste — is a huge unknown.

"What's hard is that we can't tease apart the physical and biological factors in the ocean that well," said Lisa Crozier, a research biologist with NOAA's Northwest Fisheries Science Center. "In changing scenarios, we have no idea what ocean survival is going to be like."

Numerous agencies and groups have focused attention on freshwater habitat and fish passage over the years and Crozier says this work is even more important in the face of climate change. Freshwater is where salmon spawn and it's where some species could retreat if ocean conditions become unbearable. Steelhead and sockeye salmon, for example, have the option to become entirely freshwater residents, Crozier said.

Salmon, in general, are adaptable and have survived drastic climate shifts

before. Crozier has already seen changes in how some sockeye populations are changing the timing and location of their migrations. Some of these changes are part of the fish's innate ability to be flexible, but Crozier and other researchers have seen what they believe are evolutionary changes in the fish as well.

"If we could remove the human impacts" — dams, pollution, harvest — "they would do just fine," Crozier said. "All these things are things we've done which push them in the same direction climate change is pushing them."

Scientists like Crozier believe salmon will remain off the West Coast for years to come, but their life cycles may take on a different shape. In some places, they are already changing. And where people were once able to fish and find abundance, they may have to look in new places.

James Gustave Speth, dean of the school of forestry and environmental studies at Yale University and former chairman of the President's Council on Environmental Quality, said in the early 2000s, "The world we have known is history."